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## ABSTRACT

The 1971 General Assembly and full board meetings of the International Council of Scientific Unions Abstracting Board (ICSU AB) were held in July at Orleans, France. This volume is the published proceedings of those meetings. The first part of the Proceedings is a detailed description of the activities of the Board. The second part records the most recent developments in the activities of the ICSU AB Members, in particular Member Services (the largest Abstracting and Indexing Services all over the world) and Member Unions, in all aspects of scientific and technical information. The third part comprises reports from the most important international organizations active in scientific and technical information. In the fourth part the proceedings of a special session with representatives of primary publications and devoted to the development of closer cooperation between primary and secondary publications are recorded. Finally the fifth part is an outline of another special session which was devoted to an interchange of views about marketing of secondary information services. This publication represents an up-to-date overview of the most recent developments in scientific and technical information worldwide. (Author/SJ)

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**PROCEEDINGS OF THE FULL  
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**JULY 1971**  
**(ORLEANS, FRANCE)**

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**ICSU AB**

BUREAU DES RÉSUMÉS ANALYTIQUES DU CONSEIL INTERNATIONAL DES UNIONS SCIENTIFIQUES

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS, ABSTRACTING BOARD

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## F O R E W O R D

The 1971 General Assembly and Full Board meetings of the ICSU AB were held in Orléans, France, at the kind invitation of Bureau de Recherches Géologiques et Minières.

In 1970, following the Full Board meeting in Columbus, Ohio, Proceedings were published for the first time. The response which it has received has encouraged the Board to continue with this publication.

The first part of the Proceedings is a detailed description of the activities of the Board. The second part records the most recent developments in the activities of the ICSU AB Members, in particular Member Services (the largest Abstracting and Indexing Services all over the world) and Member Unions, in all aspects of scientific and technical information.

The third part comprises reports from the most important international organizations active in scientific and technical information.

In the fourth part the proceedings of a special session with representatives of primary publications and devoted to the development of closer cooperation between primary and secondary publications are recorded.

Finally the fifth part is an **outline** of another special session which was devoted to an interchange of views about marketing of secondary information services.

This publication represents an up-to-date overview of the most recent developments in scientific and technical information world-

S E S S I O N 1 :

ACTIVITIES OF THE ICSU AB

Chairman : B. RIEGEL

1.1. REPORT FROM THE EXECUTIVE COMMITTEE

by Byron RIEGEL  
President, ICSU AB

This report consists mainly in the resolutions taken by the 1971 General Assembly of the Board.

1. - REPORT FROM THE EXECUTIVE COMMITTEE

The Executive Committee has held discussions with representatives of WFEO on the matter of WFEO's membership of ICSU AB. The WFEO General Assembly had agreed in principle with the proposal of the Board but it appeared that it would not be feasible to act in this matter until 1973.

Under these circumstances the Executive Committee recommended to the General Assembly that action to implement RESOLUTION 3 of the Columbus Full Board meeting and consequential resolutions be deferred. A general discussion followed and the General Assembly decided to endorse the recommendation of the Executive Committee.

RESOLUTION 2: Following the discussions which the Executive Committee of the ICSU AB have held with representatives of WFEO on the matter of WFEO's membership of the Board, it now appears that it would not be feasible at the present time to implement RESOLUTION 3 of the Full Board meeting held in Columbus on 21st July 1970. Under these circumstances, the General Assembly of the Board resolved to defer action on this and consequential resolutions.

2. - ADOPTION OF NEW STATUTES, BY-LAWS AND REGULATIONS

The 3rd draft of the proposed revisions (doc JP/MC/877) was circulated to all ICSU AB members by the end of May 1971. Several trivial changes, which J. Sykes mentioned, needed to be incorporated in this 3rd draft.

Apart from these changes, substantial amendments consequential on RESOLUTION 2 above needed to be made. J. Sykes gave details about the amendments to the 3rd draft. Several other minor changes were suggested by the General Assembly before the new Statutes, By-laws and Regulations were formally adopted.



RESOLUTION 3: The General Assembly of the ICSU AB resolved unanimously to adopt the new version of Statutes (doc JP/MC/1100), By-laws (doc JP/MC/1101) and Regulations (doc JP/MC/1102) which were to take effect immediately.

### 3. - ADMISSION OF NEW MEMBERS

#### (a) Member Countries

The Executive Committee considered applications for membership as Member Countries from Belgium, Canada, and United States. The Executive Committee warmly welcomed these applications and recommended to the General Assembly that the applications be approved. The General Assembly decided unanimously to approve these applications and adopted the following resolutions.

RESOLUTION 4: The General Assembly has considered an application for membership as a Member Country from Belgium at level 1 of dues. The General Assembly warmly welcomes this application and approves it unanimously.

RESOLUTION 5: The General Assembly has considered an application for membership as a Member Country from Canada at level 1 of dues. The General Assembly warmly welcomes this application and approves it unanimously.

RESOLUTION 6: The General Assembly has considered an application for membership as a Member Country from the U.S.A. at level 3 of dues. The General Assembly warmly welcomes this application and approves it unanimously.

#### (b) Member Services

The Executive Committee considered applications for membership as Member Services from the American Water Resources Association and from Engineering Index. The Executive Committee warmly welcomed these applications and recommended to the General Assembly that the applications be approved. The General Assembly decided unanimously to approve these applications and adopted the following resolutions.

RESOLUTION 7: The General Assembly has considered an application for membership as a Member Service from the American Water Resources Association. The General Assembly warmly welcomes this application and approves it unanimously.

RESOLUTION 8: The General Assembly has considered an application for membership as a Member Service from Engineering Index. The General Assembly warmly welcomes this application and approves it unanimously.

#### 4. - ELECTION OF THE PRESIDENT

RESOLUTION 12: The General Assembly unanimously re-elected B. Riegel President of the Board.

#### 5. - ELECTION OF THE EXECUTIVE COMMITTEE

RESOLUTION 13: The General Assembly unanimously elected the Executive Committee of the Board as follows:

President: B. Riegel

ICSU

Member Countries: Belgium  
U.S.A.

Member Unions Representatives: L. Delbos  
K. Faegri  
A. Wilson

Member Services Representatives:  
D. Barlow  
N. Dusoulier  
P. Parkins  
Ch. Weiske

#### 6. - POSITION STATEMENTS

RESOLUTION 14: The General Assembly resolved unanimously to approve the two documents: (1) ICSU AB Position Statement : ISDS and the Input Plan (doc JP/MC/1118) and (2) ICSU AB Position Statement in Relation to UNISIST (doc JP/MC/1113). ( see Appendix pp. 205-206 and pp. 199 - 202 respectively).

by R.J. SMITH

Chairman, Planning and Steering  
Committee

Much of the work of the Planning and Steering Committee has been concerned with the activities of the other committees and working groups. This work has been reported separately and the Planning and Steering Committee report will be limited to considerations of developments towards the Input Plan.

At the Full Board Meeting in Columbus, Ohio in July 1970, the Board unanimously approved the proposals contained in "World System for Abstracting and Indexing Services, Part 1, Plan for Developing Cooperation at the Input Stage" and the Planning and Steering Committee were instructed to proceed immediately with an implementation plan. Further discussions by the Planning and Steering Committee made it apparent that there were studies which needed to be performed before implementation and this report is concerned with outlining these studies.

### INTRODUCTION

The Planning and Steering Committee agreed that it would be a prerequisite to implementation of the Input Plan that a detailed study should be made of the periodical literature as covered by ICSU AB Member Services. This study, they believed, should take priority over all other studies for the Input Plan.

The purpose of the study would be

- (1) to establish an inventory of periodicals covered by ICSU AB Member Services.
- (2) to define the productivity of each of the periodicals in each field in order to

- (a) prepare a list of the core journals in each field remembering that these core journals should be acquired by each Member Service in their field (see Input Plan, Section 4b,p7).
- (b) allocate the acquisition of non core journals among ICSU AB Member Services to ensure overall coverage (see Input Plan, Section 4c,p8).

#### DEFINITION OF AN INPUT PLAN

In order to avoid protracted discussion on the definition of a periodical, the Planning and Steering Committee had suggested that, for the purpose of the Input Plan, a periodical should be defined as any periodical which is scrutinized by ICSU AB Member Services and which appears at least three times during the year that the inventory is being prepared and during the following year at regular or irregular intervals. These periodicals would be called Input Plan Journals (IPJ).

#### RULES FOR ASSESSING IPJ PRODUCTIVITY

The Planning and Steering Committee consider that it is necessary to agree upon broad categories of papers as well as precise definitions for each category. From these results general productivity (total and field by field) will be studied. Previous ICSU AB studies have shown that unless precise definitions are made the productivity count may vary widely in the number of papers which are included or excluded.

The definition, once drafted, would need to be tested before the assessment of productivity could proceed.

#### INVENTORY OF IPJ

The inventory should contain the following information

- (a) title of the journal
- (b) title code
- (c) place of publication
- (d) language(s) used in the periodical
- (e) Member Service(s) covering it

The title code could take one of a number of forms but since its only purpose would be to sort data and prepare tables, Coden will be used. Coden has been selected since it is the most widely used code at the present time.

The procedure for the preparation of the inventory would be that each ICSU AB Member Service would send to a central office photocopies identifying the periodicals which they monitor. Each Member Service would note, on the photocopy of the cover, the following information

- (a) the name of the Member Service supplying the photocopy
- (b) the ASTM Coden for the periodical represented by the photocopy, if possible.
- (c) the language in which the contributions contained in the periodical were printed.

This material would be sorted and from it an inventory prepared. It is expected that it would contain between 20,000 and 30,000 periodical titles.

#### DETERMINATION OF JOURNAL PRODUCTIVITY

The purpose of this step would be to determine journal productivity (total and by field) for each IPJ by studying three issues of each journal. Work sheets would be prepared and it would be the responsibility of each Member Service to complete them.

#### DETERMINATION OF IPJ

The information contained in the completed worksheet would be input into a computer. It would be merged and sorted and a table prepared. The list so produced would contain all the essential information needed to develop cooperative arrangements to avoid unnecessary duplication of input (coverage) among Member Services.

From this information it would be possible to determine

- (a) the list of core journals by field
- (b) within a language where there are several Member Services to which service non core journals will be attributed.

In some cases decisions as to core journals and as to the attribution of non core journals will be apparent. In others, it will be more difficult and allocations will need to be determined by discussion among Member Services and in some of these cases it may be that a study, article by article, will be required.

#### SYSTEM DESIGN

A system will be designed for implementation within the Input Plan for both the obvious cases and the questionable cases. The System Design will take account of pilot experiments, the time schedule, the basis for cost recovery, etc.

#### PRELIMINARY COST ESTIMATES

The Planning and Steering Committee have prepared a tentative time schedule for the Input Plan and some preliminary cost estimates. These estimates cover the possibility of reimbursing Member Services for clerical effort expended in the completion of the worksheets but make an assumption that each Member Service would be prepared to provide the photocopies necessary to identify the IPJ which they monitor at no charge.

1.3      REPORTS OF THE SPECIALIZED  
WORKING GROUPS AND COMMITTEES

A PROGRESS REPORT

by M.D. MARTIN, member  
UNISIST/ICSU AB WORKING GROUP  
ON BIBLIOGRAPHIC DESCRIPTIONS  
Systems Manager, INSPEC

The background, plans and accomplishments of the UNISIST/ICSU AB Working Group on Bibliographic Descriptions were described by J.L. Wood in the Proceedings of the Full Board Meeting, July 1970\*. The purpose of the present paper is to report on the further work which has been undertaken during the past year, and on the Working Group's revised plans for the preparation of a Reference Manual on machine-readable bibliographic descriptions.

Full meetings of the Working Group have been held in Paris in October 1970 and April 1971. Task Group meetings have also been held from time to time, and their work has been pursued by individual effort and by correspondence.

The work of Task Group 1 (transliteration and transcription schemes), is near to its conclusion. This is not to say that recommended schemes now exist for the transliteration or transcription of all languages and alphabets into a basic roman alphabet, without diacriticals; rather that those aspects of the problem which were within the scope of a group of this nature have been dealt with, and other aspects have been identified and defined so that the guidance of better qualified bodies can be sought. Thus the main products of the Task Group's work have been :

Schedules for transliteration of languages using the Cyrillic alphabet, into a roman alphabet without accents or diacriticals (based on relevant ISO Recommendations).

Schedules for transcription of accented letters in languages using a modified roman alphabet.

A listing of other languages which use non-roman alphabets, together with an indication of their relative priority in relation to scientific and technical information services.



It is hoped that it will be possible to obtain or encourage the development of suitable transliteration schemes for languages in the last category by approaching standards bodies or other suitably qualified organisations.

Task Group 2 (periodical title abbreviations) has also completed its work, with the publication, by permission of Standards Committee Z39 of the American National Standards Institute, and in association with Chemical Abstracts Service, of an International List of Periodical Title Word Abbreviations, based on the Z39 list and incorporating improvements proposed by other language groups represented in the Working Group. This International List is obtainable from the ICSU AB Secretariat or from Chemical Abstracts Service. It has been made available to relevant standards bodies, including ISO/TC/46.

In passing, it is worth noting that the results of the work of both these two Task Groups imply the need for a continuing machinery of registration and maintenance : in the one case, to obtain and distribute transliteration schemes for languages which are not at present satisfactorily covered; in the other, to provide an on-going service of assignment and registration of new abbreviations. It is characteristic of the activities of the Working Group in general that they will require procedures for continued maintenance and updating. As yet no such procedures have been evolved on any other than the most informal level; and an important part of the final deliberations of the Working Group must be the consideration of what machinery will be appropriate for this purpose.

Task Groups 3, 4 and 5 (Titles of original contributions; author names and affiliations; and data elements required to identify a periodical issue and a paper within an issue) had already completed their work during 1970. Task Group 6 has also now completed its work on supplementary data elements, and has defined a broad classification of the types of information which may be entered, while leaving ample scope to the individual system designer to introduce such additional fields as are required. Task Group 7 (character sets, data element tagging, machine-record format) has held two further meetings. It is working within the framework of ISO Recommendations (or draft recommendations), as regards both character codes and bibliographic record formats; in the latter case it has submitted comments to ISO/TC 46 on certain aspects of the draft ISO recommendation. The Task Group has made significant progress towards the definition of extended character sets suitable for scientific and technical information exchange, and their representation in machine readable form. It is expected that its work will be largely completed by the end of 1971.

An additional Task Group, TG9, was formed in 1970 to work on data elements required for non-periodical literature. It was expected that this work would benefit substantially from the material and methodology developed in dealing with the periodical literature, and would therefore move much more rapidly. This has proved to be the case, so much so that it has led to a major change in the Working Group's plans for compiling and testing a Reference Manual. Again, Task Group 9's work should be complete by the end of this year.

At the beginning of 1971, ICSU made the necessary funds available for a contract to be placed with one of the member services of ICSU AB to compile a Reference Manual based on the material accumulated by the Working Group and covering bibliographic citations to serial literature. The original plan was that a first draft would be prepared for the April meeting of the Working Group; that the manual in this partial form would be tested during the summer of 1970; and that a revised and final draft would be completed at the end of the year. Other sections covering non-serial literature would then be added at a later date.

In the event, the first draft was duly completed in April 1971; but at the Working Group meeting it became apparent that the work on non-periodical literature was likely to be completed much earlier than expected. It was also clear that it would be much more satisfactory to test and revise the Reference Manual as a whole, rather than in two parts. It was therefore decided that a first draft of the complete manual would be prepared by the end of 1971; that the testing would be delayed until 1972; and that publication of the Reference Manual should then be possible at the beginning of 1973, after whatever revision turned out to be necessary. The Postgraduate School of Librarianship and Information Science of the University of Sheffield has been appointed to supervise the testing, and has already undertaken some very useful preliminary studies.

The Reference Manual in its final form will be in three parts. The first will be aimed primarily to serve those people who are responsible for the preparation of bibliographic citations in machine-readable form, and will provide detailed guidance on the identification, selection and entry of each data element, and on the "families" of data elements which are regarded as essential for particular types of literature. The second will be directed towards the computer systems design and will provide more concise formal definitions of each data

element. The third will cover record format, character coding and other system-oriented topics. Appendices will include recommended lists of codes, transliteration schemes, etc. Some of the coding schemes, e.g. for languages and country names, can only be provisional at this stage, in view of work which is going on in ISO and elsewhere. It is the policy of the Working Group to adopt existing ISO Recommendations wherever possible, and to submit its own proposals to ISO for consideration as international recommendations.

Although the activity of the Working Group on its present scale may be concluded with the preparation and publication of the Reference Manual, it should be stressed once again that, as with any working manual of its size and complexity, there will be the need for a continued maintenance activity to take account of user experience, new developments in the international standards fields, and the contributions of other interested parties. Nevertheless, it is hoped that at the very least the Manual will be a major contribution to standardising the practices of computer-based secondary information services, and in this way will be of direct benefit both to the services themselves and to the user community.

At the 1970 ICSU AB Full Board meeting it had also been reported about the proposals for an International Serials Data System (ISDS)\*. Since that, the UNISIST Central Committee has approved the proposal of the UNISIST/ICSU AB Working Group on Bibliographic Descriptions to establish an International Serials Data System and has appointed an Ad Hoc Task Group to make this project operational. This Task Group is now under the direct control of the UNISIST Central Committee. Detailed information can be obtained from UNISIST.

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\* M.D. MARTIN : The UNISIST/ICSU AB Working Group on Bibliographic Descriptions. ICSU AB : Proceedings of the Full Board Meeting, Columbus Ohio, July 1970, pp. 63-70 .

1.3.2. WORKING GROUP IN ASTRONOMY

by J.B. SYKES  
Chairman, ICSU AB Working Group  
in Astronomy

The Chairman, Dr J.B. Sykes (IAU), reported on a meeting held in May 1971 between himself and representatives of Bulletin Signalétique and Astronomy and Astrophysics Abstracts. Topics discussed had included :

- 1.- Revision of the Universal Decimal Classification in Astronomy.
- 2.- Compilation of a world list of observatories.
- 3.- Bibliography of observatory publications : first edition published.
- 4.- Comparison of classification schemes. An "averaged" classification scheme has been proposed by Bulletin Signalétique and will be discussed by correspondence with Astronomy and Astrophysics Abstracts and Referativnyi Zhurnal; it may later be adopted for use by all three services.
- 5.- Cooperation with primary publishers and editors : development of a thesaurus of subject index terms, possibly beginning 1972.
- 6.- Cooperation between member services in covering fringe journals.
- 7.- Production of a guide to information services in Astronomy, similar to that devised by the Working Group in Physics.

1.3.3.

WORKING GROUPS IN GEOLOGY

by J.J. LLOYD

Chairman, ICSU AB Working Group  
in Geology

Multilingual Thesaurus

Representatives of ICSU AB and the IUGS have combined to form a Working Group for the development of a multilingual thesaurus. The object is to function as a pilot project that will develop procedures and guidelines that may be applied to a larger task and to other disciplines. A subset of the vocabulary (structural geology) has been chosen and the group contains geologists representing French, English, German, and Czechoslovakian information activities. Early efforts to utilize a UNESCO Guideline for the Construction of a Multilingual Thesaurus led to a meeting with the author and staff personnel of UNESCO. The recommendation of the Working Group was to return the Guideline for revision and the suggestion that its publication be postponed until it could incorporate the tested experiences of the Working Group.

The analysis of the vocabulary in the field of Structural Geology has been started and existing terms with their definition collected and examined. Some criteria for the choice of descriptors and non-descriptors as well as for the relationships between the terms have been determined.

For each language (English, French, German, Czech) a preliminary study of these terms has been completed.

A meeting of the Working Group has been scheduled for early next year in order to compare the results of these studies.

It is hoped that the Thesaurus will be completed in time for presentation to ICSU AB Full Board meeting in July, 1972 and to the 24th International Geological Congress to be held in August, 1972.

### Classification

The Working Group in charge of the preparation of a common classification scheme to be used by ICSU AB Member Services dealing with Earth Sciences started its work in 1969 by comparing the classification scheme used by the ICSU AB Member Services. It was decided to eliminate the UDC as a starting point for a classification scheme, the differences between this classification and the schemes used by Member Services of the Board being too important.

In the course of several meetings this Working Group has agreed upon the principles of a common scheme, which has been prepared subsequently and is now being considered in detail by them.

It is hoped that the final version of this common scheme will be ready in February 1972 and Member Services will start using it in 1973.

1.3.4.

WORKING GROUP IN PHYSICS

by H.D. BARLOW

Chairman, ICSU AB Working Group  
in Physics.

The Member Services represented on the Working Group in Physics include the English-language service Physics Abstracts, the French-language service Bulletin Signalétique, the German-language service Physikalische Berichte, and the Russian-language service Referativnyi Zhurnal. A representative from the International Union of Pure and Applied Physics is also a member of the Working Group.

During the year since the last Full Board Meeting in Columbus in July 1970, the Working Group has met in Braunschweig, West Germany in December 1970, and in Paris in April 1971, and has done a great deal of work in the ambitious programme outlined in my report to the Full Board last year.

This programme has had as its aims :

- (1) Exchanges and comparisons of abstracts between member services to determine whether co-operation can be achieved in covering fringe journals.
- (2) Work towards a common classification in Physics.
- (3) The investigation of problems involved in constructing multilingual thesauri in Physics.
- (4) The setting down of guidelines and codes of practice for studies on and exchange between abstracting services in Physics, which could also be applied in other fields.

The detailed work done over the past year towards these aims has been as follows :



(a) Co-operation between Physics Abstracts and Bulletin Signalétique

An experiment begun in 1969 has been continued with modifications since January 1971 for the supply from Bulletin Signalétique to Physics Abstracts of items on Physics from 130 journals which Physics Abstracts considers as "tail-end", ie journals normally producing less than ten items per annum. Physics Abstracts has been analysing this input and comparing it with its own coverage of the journals concerned. In addition Bulletin Signalétique has been supplying Physics Abstracts with items from journals not scanned by Physics Abstracts at all. The aim of these studies is to determine whether it is feasible to co-operate in the coverage of fringe journals and thus to reduce the relatively high cost incurred if all services continue to attempt complete coverage themselves. The exchange is due to continue until December, but up to the end of June, 1,372 items have been received by Physics Abstracts from Bulletin Signalétique.

The spirit of co-operation between Bulletin Signalétique and Physics Abstracts revealed itself in a most practical way when, earlier this year, the prolonged postal strike in the United Kingdom deprived INSPEC of its source of supply of primary journals. CNRS came to the rescue immediately by making microfilm copies of appropriate periodicals and sending them to London by special courier. In London copies were reproduced from the microfilm and entered the normal data base production system, thus averting what would have been a serious shortage of material for input into the INSPEC file.

A study has also been carried out on the comparison of abstracts used by Bulletin Signalétique and Physics Abstracts for identical primary papers. A methodology for comparison was drawn up and agreed between the two services and is to be published as a Working Group paper.

The study itself covered 60 Bulletin Signalétique and Physics Abstracts abstracts and the number of words and information content of each abstract was compared between the two services. A supplementary study was undertaken to attempt to determine a pattern in the "missing" information elements, ie those elements not found in common between the Physics Abstracts and Bulletin Signalétique abstracts.



(b) Co-operation between Physics Abstracts and Physikalische Berichte

The supply of copies of items from six German language journals from Physikalische Berichte to Physics Abstracts begun in 1969 was continued and stepped up by the addition of some 20 further journals, and a reciprocal exchange was started by the supply of items from 13 English-language journals from Physics Abstracts to Physikalische Berichte. So far in 1971 the total number of items supplied by both sides has been 193. With the analysis of the papers received, a pattern is beginning to emerge for the basis of future co-operation on exchange of fringe area journals between member services. In connection with the input of material from Physikalische Berichte to Physics Abstracts, a study was undertaken by Physics Abstracts to assess the ability of Physikalische Berichte outside abstractors to write good abstracts in English, and other studies have concerned selection policies of the two services in different fields.

(c) List of Eastern Journals

A list of all the journals from Eastern European countries which are scanned in common between Physics Abstracts, Physikalische Berichte and Bulletin Signalétique has been produced. We are now waiting for Referativnyi Zhurnal to supply a list of other physics journals which they themselves scan but which are not on the common list. This will be invaluable in future planning towards sharing input facilities.

(d) Physics Classification

The work on comparison of Classifications in Physics has been completed with a supplementary report which compared the AIP's Current Physics Titles Classification with those of the four member abstracting services and also with UDC. An historical paper has also been prepared which traces the work carried out by the group on classification comparisons over the past four years, and this is to be published as a Working Group Paper.

The next aim is to work towards a common classification and as a starting point a draft of the new INSPEC unified classification which incorporates points from all current classifications, was tabled at the April meeting of the Working Group and comments and suggestions from the other services have been invited.

A newly prepared draft subset of this classification covering Physics has also been prepared and this will be used by Physics Abstracts in 1972. Discussions are going on within the Working Group on this new draft and it is hoped that a common classification in Physics will emerge during the coming year using the draft as a basis.

(e) Comparison of Index Terms

Physics Abstracts, Bulletin Signalétique and Physikalische Berichte have exchanged lists of index terms in Plasma Physics. Work is now in progress to translate the lists by each service into its own language and to use the methodology formulated to do so as the basis for the creation of a multilingual thesaurus in plasma physics.

Problems concerning indexing and classification in interface areas between Physics and other subject areas such as Astronomy, Engineering, Computer Technology, Biology, Chemistry and Geology, have also been the basis for discussion within the Working Group and further studies on this subject have been proposed.

(f) Other work undertaken by the Working Group has included :

(i) the formulation of a draft code of practice to be followed in the compilation of any throughput studies made on any of the member services, and this has been submitted to the Planning and Steering Committee for their approval, since it will be appropriate for use by any member service of ICSU AB.

(ii) Guidelines for exchanges of technical personnel between member services are being drawn up to cover terms of employment, health and pension rights etc during the period of any possible exchange.

(g) Physics Brochure

A brochure entitled "Access to the World's Physics Literature" has been prepared in six colours by the Working Group giving brief information on ICSU AB and the four member services in Physics, including the coverage, content, language, publication address and price of each. 2,000 copies of the brochure have been printed and will be distributed widely.

As you can see, a real spirit of co-operation now exists between the member services. During the past year we have achieved a great deal towards the objectives of the Working Group and are now one small step nearer the ultimate world unification of information systems in Physics. For this achievement I must thank the fellow committee members who continue to give up a great deal of their time and interest to the work of the Group.

S E S S I O N 2 :

REPORTS FROM MEMBERS OF THE  
ICSU AB

Chairman : V. WEIDEMANN

2.1.

BULLETIN SIGNALETIQUE

PROGRESS REPORT 1971

by N. DUSOULIER

Editor-in-Chief, Bulletin Signalétique  
du C.N.P.S.

1970 was the last year for the Centre de Documentation du CNRS as a traditional centre. System P.A.S.C.A.L. was born in 1971 and it now processes more than half of Bulletin Signalétique sections.

System P.A.S.C.A.L. attempts to conciliate problems which arise with single input for editing Bulletin Signalétique on paper and on tapes. There are now three work stages : Primary document stage, Bulletin publishing stage and Bibliographic research stage.

1. Treatment of primary documents

Documents (periodicals, books, theses, conference proceedings, etc) arrive in the Library in increasing numbers (about 15 000 journal titles). About 10 000 of these are sent regularly to the Bibliographic and Editorial Divisions and, after selecting, abstracting and indexing the papers they contain, are sent back to the Library.

Apart from those problems which arise in handling and circulating such a large number of documents, there are also those due to irregularities and unforeseen arrivals.

System AMPERE arrivals daily and, by a forecasting model, sends out one or, if necessary, two claims.

When the system starts operating, and later when new periodicals are subscribed to, a model is set up which simulates successive arrivals by entering into memory the journal title with its issuing characteristics. These parameters can be adjusted during use.

This data with data on stock in hand, enables us to run the "Circulation" file which holds previsions, claims, and arrivals of unforeseen journals.

## Organisation :

Punched cards are the data base used between Library and computer. Cards are edited monthly (or yearly for infrequent titles) for journals issues expected during that time and arrivals are noted as well as unforeseen anomalies.

## Improvements :

Two on-line terminals will be installed to register daily arrivals and for claims' management. This will greatly improve services by reducing processing time and "noise" in claims.

## 2. Information production.

The whole system was built for maximum production in all stages and with the following three ends in mind :

- maintain and improve publication of Bulletin Signalétique,
- establish monthly profiles,
- increase retrospective search.

### 2.1. Bulletin Signalétique

We hoped to mechanize three sections in 1971. Results of trials were such that seventeen sections were mechanized and all remaining sections which already have a documentary language, will be mechanized in 1972. Mechanization reduces publication time-lag but, thanks to phototypesetting linked to the computer, we can maintain full, classical typography and easy access to information owing to multiple entries.

Data is logged every day, with temporary numbering of abstracts, which are sorted once a month according to the classification scheme entered once a year.

The possibility of publishing Bulletin Signalétique on magnetic tape or in microformat is also being studied in order to facilitate transport and stocking. Sending bulletins on paper by Air Mail is very expensive, surface mail for foreign subscribers is slow and loses that time gained by shortening publication time-lag.

## 2.2. Selective Dissemination

Selective Dissemination has the following characteristics

Speed : At present profiles are produced **monthly**. Stage two will enable us to produce fortnightly or weekly profiles.

Pertinence : by indexing in depth.

Informality : Profiles must be easily modifiable, without complicated formalities or delays. Three types of profiles are envisaged.

- Group profiles for users having similar interests, in new fields for instance. Two profiles of this type are already working.
- Personal profiles, drawn up after discussion with several different users and where the title of the profile is public.
- Confidential profiles. Same as the above except that the titles will not be published.

## 2.3. Retrospective Search.

As documentary stock on tape increases this service will pass gradually from traditional searching procedures to full automation and will have to meet two different needs.

- Determine a question, in which case batch-processing will be cheaper.
  - Treat a problem by iteration, where on-line inquiry is necessary.
- The latter requires the training of users in this method as few of them are acquainted with it.

## 3.- Automatic bulletin publication and filling-in of work-sheets

The filled-in work-sheets are sent daily for punching on tape after which follows :

- correction
- final setting, index sorting and matrix tape generation,
- printing (offset) and dispatch to subscribers (automatic)

At present we use two systems because of the amount of copy to be treated and also to avoid pile-up if one of the systems breaks down, Digiset-Siemens 4004-35, on the one hand, and Monotype GSA-Monophoto 600, on the other.

## 4. Entry into documentary systems.

As there is only one data logging stage for Bulletin Signalétique and for documentary stock, information is entered linearly and structured so as to obtain a format compatible with systems in other centres. All control codes for photocomposition must also be eliminated.

## 5. Systems used.

Two searching systems are used for security and in order to work at different levels in vocabulary change.

CRISTAL (CNRS-Documentation) was first thought of as a means to update vocabulary and is now used where work on thesauri is not yet finished.

MISTRAL (C.I.I.), a more sophisticated system, uses thesauri with two kinds of relations : strict order generic relations and synonymous equivalence relations. Documents entered by first level generic descriptors are indexed automatically.

In both systems, the same principle for searching is used : syntactic analysis (verification of the Boolean equation) and semantic analysis (verification of the existence of the descriptor ).

## 6. Products.

### 6.1. Profiles.

All elements of the bibliographic description, as well as key words and abstract, are given for each document. In certain cases, a simplified version without the abstract is obtainable. Other elements, such as library call number, classification code, etc., which allow rapid access to the original document, may also appear.

For easy use, the profile is in booklet form, each leaf containing one abstract. They are detachable, and can be used to order a copy of the original document or for card index filing.

### 6.2. Retrospective search.

Bibliographies by batch-processing contain the same elements as profiles. When on-line processing becomes operational the user will be able to modify his request as he sees fit and the final choice (order copies of original documents or print out of selected bibliographies) rests with him.



### 6.3. Other products.

Thesauri for indexing and searching can be edited by MISTRAL.

List of journal titles by subjects are scheduled for the second operational stage.

### 7. New publications in 1972.

Whilst working towards the complete mechanization of all its sections, Bulletin Signalétique also seeks to improve its contents. One result of mechanization is that it allows for greater product diversification and specialisation.

As from 1972 certain chapters will be published separately as follows.

1. Electrical Engineering
2. Biomedical Engineering. Medical Information Processing.
3. Vertebrate physiology
4. Dermatology
5. Ophtalmology
6. Oto-rhino-laryngology
8. Linguistic developments.

Linguistic work continues. A thesaurus in Pharmacology has just been published, the thesaurus for Polymere is in press and that for Earth Sciences is being processed. A thesaurus of Informatics will be undertaken jointly with IRIA (Institut de recherche d'informatique et d'automatique) as well as one in Biomedical Engineering and Medical Engineering and Medical Information Processing. Construction of a thesaurus in Information Sciences will also be started.

## 9. Cooperation.

Cooperation with specialised French documentation centres within the framework of CND (Comité National de Documentation) has continued and also on the European level. As well as their cooperation within ICSU AB, VINITI and le Bulletin Signalétique have signed an agreement, as these two multidisciplinary services would like to make their respective systems compatible.

## 10. Conclusion.

From this outline you will have an idea of the efforts undertaken by our Centre in order to play our part in building a world documentation system. These efforts will continue and be developed after we move into our new and larger premises.

by H.D. BARLOW  
Director, INSPEC

Although it has been requested that member services should concentrate on current research and development in their reports to the ICSU AB General Assembly this year, it is appropriate to begin with a brief review of some of the developments that have taken place during the past year, and one or two of the quite unusual problems INSPEC has had to face.

During the past year, INSPEC has continued to provide printed publications, tape data bases and SDI services in the fields of physics, electrical engineering, computers and control. For the year 1970, the combined output was in excess of 140,000 abstracts. A special effort has been mounted to improve the currency of all these services, and the average delay time from receipt of a source publication to the despatch of the abstracts journal from the printers has been reduced to below twelve weeks.

In the year under review, a large part of INSPEC's development has been concerned with SDI services. In August of last year - in other words, shortly after the last ICSU AB meeting - a "standard profile" service, called TOPICS, was introduced as an extension of the existing SDI service in electronics. Some 21 standard profiles were established, and met with a very favourable response. In April of this year, the SDI service was integrated fully with the main INSPEC production operation, and its coverage was extended to embrace the whole data base. A further range of some 40 TOPICS profiles is also being introduced to cover other areas.

Towards the end of 1970 the final report of a research project on the evaluation of index languages - "DEVIL" - was published. This study, carried out over the preceding two years, was an attempt to evaluate methodically the advantages and disadvantages of various different indexing approaches, from the point of view of the long-term use of the INSPEC data base. It concluded with the recommendation that free-language terms be adopted as the principal form of indexing the input stage; other implications of the report are referred to in this paper.

Accordingly, at the beginning of 1971, free-language concept indexing was introduced into the INSPEC data base, to be used in SDI searches, in tape services to other centres, and in due course for retrospective searching. At present time, this indexing is additional to the controlled subject headings and "modifier lines" which are used for printed subject indexes.

The end of 1970 also saw a different kind of change, when all INSPEC's editorial and production staff moved to a new location at Hitchin, some forty miles north of London, where they now have ample space for the expansion which is expected during the next few years.

It would be wrong to conclude a review of the past year without referring to the postal strike which afflicted the UK in January and February of this year, and which caused quite special problems for a large-scale abstracting and indexing service. We were fortunate in being able to call on the assistance of two of our American sister organisations, and above all on the willing help of Mme Dusoulrier and her staff at Bulletin Signalétique. Thanks to a special courier service between London and Paris, we were able to maintain an adequate level of throughput during this very difficult period; a remarkable example of the real practical value of the contacts that have been built up through the activities of ICSU AB.

To turn now from the past to the present and the immediate future:

Perhaps the most important research and development activity during the current year is the INSPEC vocabulary development programme. A new integrated classification scheme and an integrated subject headings list, covering the whole subject field of INSPEC, have been drafted for introduction in January 1972. A "vocabulary development file" has been established in machine readable form, and is being used, among other things, to map the relationships between classification and subject index headings, and to act as the nucleus for development of a thesaurus. The further growth of the thesaurus will be based to a large extent on a computer analysis of terms actually used in free-indexing. The thesaurus concept is somewhat unconventional in that it will not be used to control the indexing at input, but as a tool for the construction of SDI profiles and search enquiries, and generally to assist in the use of the data base. In other words, it will be a guide to the language used in the data base, rather than a means of controlling language at input.

Relevant parts of the results of this work are being made available to the ICSU AB Working Group in Physics.

Another significant geographical move in INSPEC's development will take place at the end of October 1971, when the IEE computer installation will be transferred from central London into the same building in Hitchin as now houses INSPEC editorial and production staff. INSPEC work already accounts for perhaps the largest single load on this machine. The configuration will be enhanced in October by the addition of disc storage, and during 1972 some local on-line visual display units will be added.

Much of the INSPEC research and development in the systems area will thus concentrate on integrating more of the production operations --such as acquisitions control-- on to the computer system, and on the use of on-line, direct access systems wherever technically feasible and economically right. Some details on the on-line developments are given in the Appendix.

INSPEC is also working towards the development of a capability for retrospective searching on the data base. An inverted file search system is under development which will be suitable for both SDI and retrospective search. In this activity INSPEC is co-operating with a parallel development by the UK Chemical Information Service. During the past three months experiments in on-line searching from a remote terminal have been conducted with the Queen's University, Belfast, where selected portions of INSPEC tapes have been entered into a search system developed by the University Computing Laboratory. A successful demonstration has been mounted and much useful information has been gained --not least about the problems of this type of search. For those who are interested, an internal report is available.

Other research activities include a significant programme of user studies which, like much of INSPEC's research, is partly funded by the Office for Scientific and Technical Information of the Department of Education and Science.

This has, necessarily, been only a brief survey of some of the developments of the past year and the work which INSPEC is engaged on at the present time. This last year has been an eventful one; we are to have as much, or more, to report at the next ICSU AB meeting 1972.

## APPENDIX

### INSPEC Research and Development in on-line input and editing systems .. 1971/72

As part of the long term policy to provide comprehensive on-line input and editing for the INSPEC production operations, a study of suitable visual display units for INSPEC work is being carried out at this moment. This activity follows on the decision in which the IEE 1902A computer installation will be moving from its London base to a location 30 miles north at Hitchin, which now houses the whole of the INSPEC production operation. This move has opened up an immediate possibility of adding VDUs to the main computer. This has many attractions from the point of view of their applications in a data base production system.

Prior to this, studies have been performed on the requirements for a free-standing input and editing system based on a separate or satellite mini-computer. These studies suggested that it would be difficult to derive maximum advantage from an on-line system unless the machine used had sufficient power and backing storage to accommodate substantial authority files and work-in-progress files. The results of this study appear to rule out the utilisation of the PDP8 computer recently installed at the Institution as a satellite machine. The PDP8 is currently being used as a multi-purpose print station and a test bed for experimental visual display editing.

At present the studies on the visual display units have indicated the most likely candidate to be a new range produced by ICL with a character set of 96 which will handle most INSPEC data with the exception of the text of abstracts themselves. A larger character set version up to 192 characters is under development and this would be utilised for text editing. This VDU has other advantages in being able to provide upper and lower case and italics. A small number of these VDU's are planned for installation in 1972, to be followed by the installation of a large number of 192 character VDU's when they become available.

A research project on the PDP8 is under way to develop an appropriate communication language and to study the problems involved in a conversational system handling bibliographical descriptions. This project should be completed early in 1972.

Further long term work is starting now on the overall design of INSPEC/2, a long-range plan for a revision of the production system to make full use of on-line techniques control, outside abstractor control, etc. The aim of this work is to up-date the earlier system design which stemmed from concepts laid down in 1966.



## 2.3. INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

### INFORMATION ACTIVITIES OF IUPAP

by W. KOCH

IUPAP Representative on the ICSU AB  
Director, A.I.P.

The IUPAP has carried on activities in the information area for many years :

1. The Commission on Symbols, Units and Nomenclature has developed standards, which have been approved and published by IUPAP, for symbols and units in physics. It has cooperated with IUPAC and similar bodies in the development and promulgation of such standards in physics, chemistry and related branches of engineering through ISO. It has played an important role in the development of the new ISO R 1000, which is a basic document for the wide adoption of the SI units -- a coherent metric system based on the metre, kilogram, second, ampere, kelvin, candela and mole.

2. The Commission on Publications has worked for many years on the improvement of information dissemination through primary journals. With support from UNESCO, it organized a meeting of physics editors in 1967 at which the Guide for the Preparation of Scientific Papers for Publication and the Guide for the Preparation of Authors' Abstracts for Publication were put into final form. These guides have been widely circulated by UNESCO and otherwise, for application in many disciplines. Problems of refereeing of papers, of following SUN standards, of cooperation with secondary services, etc., were discussed. Consideration was given to the formation of an international organization of physics editors, but it was felt that the Publications Commission could serve the same purpose more effectively, and it was decided to establish a periodic Newsletter to be sent to all physics editors.



3. A European Physical Society was established in 1969 with the general encouragement of IUPAP and the Publications Commission. One of its major roles is the coordination of physics journals in Europe and it has established criteria or standards in accordance with which many journals now carry the designation "A Europhysics Journal." A meeting of editors of European physics journals was held in November 1970.

4. The American Institute of Physics publishes something like 35% of the primary journal literature of physics and is establishing major secondary services based on primary literature. Therefore, a brief summary of its information activities seems appropriate.

AIP has produced and marketed in 1971 a magnetic tape service called Searchable Physics Information Notices. SPIN provides data from about 70 journals, covering about half of the total journal literature of physics, giving for each article the title, author, location, abstract, classification, key phrases/keywords, and cited references.

Plans for 1972 include :

a) advance publication of abstracts, in a new monthly journal called : Current Physics Advance Abstracts;

b) publication of a monthly titles journal called Current Physics Titles;

c) marketing of microforms of current physics literature in a monthly service called Current Physics Microform, that is coordinated in its coverage and timing with CPT and SPIN. All of these will be indexed according to the classification developed by AIP and the abstracts and titles journals will be selectionalized. SPIN and Current Physics Titles will carry for each article the reel and frame number of the article in the microfilm. Initially, the services other than SPIN and CPT will cover only journals of AIP and its member societies.

d) AIP is also interested in the improved compilation and distribution of reference data. Beginning in 1972, AIP and the American Chemical Society will jointly publish the Journal of Physical and Chemical Reference Data, carrying the tables reviewed and released by the National Standard Reference Data System of the U.S. National Bureau of Standards.

2.4. CHEMICAL ABSTRACTS SERVICEPRESENT AND FUTURE II

(See also Part I in Proceedings ICSU AB  
meeting July 1970, pp 145-148)

by Dale B. BAKER  
Director, CAS.

I. The Target System

The Cas target system combines human intellectual analysis and computer-based processing. The roles of the computer in the system are :

1. To receive material derived by human intellectual analysis;
2. To support that analysis with machine aids and augment the information flow by retrieving related previous work;
3. To apply automated validation checks and trigger exception reviews by editorial staff;
4. To eliminate the necessity for manual bridging between processing steps;
5. To automate the ordering (sorting) and formatting of the information, both on a data-directed basis;
6. To control composition machinery; and
7. To provide computer-readable files.

The major features of the CAS target system are illustrated and explained in a "Report on the Fourteenth Chemical Abstracts Service Open Forum", Chicago, Illinois, September 15, 1970 (25 pages). Copies of this report are available and free from the CAS office.

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- II. Computer-searchable indexes to CA; Integrated Subject File (ISF), will first be available in midsummer, 1971. This is the machine-readable counterpart of the volume and collective subject, formula, and registry number indexes to CA. This ISF is the first CAS computer-readable service oriented specifically toward retrospective searching of the chemical literature. The CAS computer-

readable services produced to date have been useful mainly for alerting a user to the publication of new papers or patents on the basis of a particular subject or substance of interest. The ISF will be significantly larger than our earlier computer-searchable files. The file covering each CA volume (each six months) will contain upwards of 700,00 entries and occupy about nine 2400-ft. reels of tape. All of CA indexes are now available in computer-readable form.

### III. CAS Unified Pilot Publication System (UPPS)

CAS' unified pilot publication system came into use in January 1971 producing the first issue of Chemical Biological Activities (CBAC). Basic Journal Abstracts started to flow through UPPS in April and Polymer Science and Technology in May 1971. This system is working well so that CAS plans at the beginning of 1972 to merge POST-J and P with the CA Macromolecular sections (Sections 40-46) covering some 33,300 abstracts. Also CBAC will be merged with the first five CA biochemical sections (Sections 1-5) covering some 32,000 abstracts. This capability is being reached one year ahead of 1970 plans and shows successful maturing of the highly automated, schedule-sensitive, full scale CAS manufacturing system. Five-year plans call for all of CA to be handled through the system by 1976. CBAC and POST will be continued only as computer-readable services in 1972.

### IV. Index Adjustments Scheduled for the Ninth Collective Period 1972-76)

1. Beginning with Vol. 76 (1972) the CA Subject Index will be separated into two separate sections : (A) A Substance Index which will include all those subject index entries which begin with the name of a substance; and (B) the General Subject Index which will contain all subject index entries which do not begin with the name of a substance.

2. The full Index Guide will be issued as a part of Vol. 76. There are many new indexing policies to be described. Annual supplement will be issued.
3. Hetero-Atom-In-Context (HAIC) Index which is a master set of molecular-formula cross references will be provided with supplements.
4. A Parent Compound File will replace the Ring Index in 1973 and will be furnished in loose-leaf and in microform.
5. CAS Source Index (CASSI) updating supplements to the serials and library holdings in 1974.
6. A Registry Handbook and Registry Number Index of Chemical Compounds with structures, molecular formulas, etc. by 1974.

#### V. Some R&D Projects Under Way

1. Direct access investigation to convert CAS system to one utilizing direct access storage devices and on-line terminals to provide remote inquiry and input processing capabilities.
2. Structure, bibliography, and nomenclature upgrading.
3. Documentation aids.
4. Unified Input.
5. Registry Extension.
6. Nomenclature translation.
7. Substructure search and structure output system.
8. Computer-assisted indexing.

#### Suggested Additional Reading References

1. "Changing Patterns in the International Communication of Chemical Research & Technology". D.B. Baker, F.A. Tate, and R.J. Rowlett, Jr., J. Chem. Doc., May 1971, Vol. 11, No 2, 90-8.
2. "Libraries & Information Technology---A National System Challenge" by Information Systems Panel, Computer Science and Engineering Board, U.S. National Academy of Sciences, Washington D.C., July 1971. Five Appendixes. Recommendations and findings from an 18-month study of the applications of computers to libraries and information systems.

2.5. CHEMIE INFORMATION UND DOKUMENTATION BERLIN

REPORT OF ACTIVITIES II

(See also Part I in Proceedings ICSU AB  
meeting July 1970, pp 149-150)

by Ch. WEISKE

Editor-in-Chief, Chemie Information  
und Dokumentation Berlin

At present Chemie-Information und-Dokumentation Berlin (CIDB) is responsible for the performance of four major tasks.

1) The production of the "Chemischer Informationsdienst" (ChemInform). ChemInform is published in two parts : part A (inorganic and physical chemistry), part B (organic chemistry). Regarding the goal of the service it is more an information than a documentation service. On the other hand ChemInform is the basis of magnetic tape services. The magnetic tape service of part A is prepared by CIDB in Berlin while part B is fed into the data basis of the IDC Internationale Dokumentationsgesellschaft für Chemie, Frankfurt/Main. The tape of part A contains bibliographic data, subject entries and inorganic compounds as they appear in the original papers (see Nachr.Chem. Techn. 19 (1971) 10, 182-83). The IDC makes available on tape first of all encoded structures of organic compounds and reaction schemes, bibliographic data and concepts (see J.Chem.Doc. 10 (1970) 2, 128-34).

2) The Encoding of organic compounds and reactions.

By using the GREMAS-system, a fragment code which describes fragments of chemical structures into letter terms, all the compounds, structures, compound classes and reactions which appear in ChemInform part B are encoded. This work is an integral part of the co-operation between IDC and CIDB.

3) The evaluation of primary literature written in German language for Chemical Abstracts Service.

Within the framework of an international information system CIDB co-operates with CAS and has the function of an input center for CAS. While in 1970 about 9.500 papers and patents were selected, abstracted, keyworded and edited, in 1971 this figure will increase to an amount of 12.000 due to the increase of the members of that division CIDB. Besides this the scientists engaged with the literature

analysis have been trained by CAS colleagues in indexing. Thus, since July 1971, abstracts and entries to the subject index in English language are prepared in one single step. For the future a direct input to the CAS-system is planned. For this reason a computer specialist works for one year in Columbus in order to become acquainted with the computerized handling of the input particularly with the registry system. The stay of the computer man will also improve the cooperative work between IDC, CAS and the Gesellschaft Deutscher Chemiker which should aim in the usage of the databank of CAS (see Chem.Eng.News 49 (1971) 15, 44-45).

#### 4) The development of SDI-Services.

At present in Berlin CA-Condensates tapes and the tapes of ChemInform part A are used for SDI purposes (see (Nachr.Chem.Techn. 19 (1971) 5, 83-84). For the first time in which the services are introduced to the community the services are supported by the German government and offered free of charge. Since the processed tapes have a different structure, they have to be searched by different strategies. Thus, a word-frequency list and a KLIC (keyletter in context)-list was produced as a means for free word-searching in CA-Condensates. In Berlin the CODEN is considered as a link between the two tape services used. Beginning with 1971 the journals processed for ChemInform are identified and signed by the CODEN. The following logic operators are used for the construction of search profiles : and, or, not, ignore, phrase.

Besides this CIDB takes part in various research and development projects, e.g. studies on compatibility of tape services, carried through sponsored by "Arbeitsgemeinschaft für Chemiedokumentation" (see Achema Jahrbuch 1968/1970, part I S. 48-52).



INFORMATION ACTIVITIES OF IUPAC

by B. RIEGEL

IUPAC Representative on the ICSU AB  
President, ICSU AB.

In order to have effective communication among scientists and engineers it is essential that we define and understand the terms which are used. For chemistry and chemical engineering, and many other related technologies, this includes weights, measures, symbols, abbreviations, and nomenclature. In 1969 an Interdivisional Committee on Machine Documentation in the Chemical Field was established. The first task of this Commission will be directed towards the machine handling of chemical structures and the computer generation of nomenclature. Most of the Divisions of IUPAC have Committees on Nomenclature which in turn have many subcommittees on nomenclature. As an illustration there is a Committee on the Nomenclature of Inorganic Chemistry, a Committee on the Nomenclature of Organic Chemistry, a Committee on Nomenclature of Analytical Chemistry, and a Committee on the Nomenclature of Polymers. Most of these Commissions work with other international groups on the standardization of scientific and technical language. For instance, there are liaisons to other Unions such as IUPAP, and IUB, to ISO, CODATA and many others. The Commission on Physicochemical Symbols, Terminology and Units work closely with sister organizations. There are special committees such as the one on the Nomenclature for Heterogeneous Catalysis and a Committee on the Nomenclature for Zeolites and Molecular Sieves.

Substantial progress has been made during the last two years by many of these committees and subcommittees on standardization. Many of these committees have published books and reports that have been given worldwide distribution. The International Union of Pure and Applied Chemistry has official meetings every other year. The conference or business meeting of IUPAC is scheduled for 15-24 July 1971 in Washington, D.C. Practically all of the commissions and committees of the Union are scheduled to meet during this time. The preliminary reports are published in "Information Bulletins" by the IUPAC Secretariat, Bank Court Chambers, 2-3 Pound Way, Cowley Centre, Oxford OX4 4ER, England. The definitive reports of the commissions are usually

published in the IUPAC Journal, "Pure and Applied Chemistry". The main thrust of this Union is to establish terminology that is universally accepted and useful for communications between scientists and engineers of all nationalities.

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2.7. BIOLOGICAL ABSTRACTS: BIOSCIENCES INFORMATION SERVICE  
OF BIOLOGICAL ABSTRACTS (BIOSIS)

by Ph. PARKINS  
Director, BIOSIS

BIOSIS has, since 1959, been recording in machine-readable form bibliographic descriptions and indexing terms relating to all articles which have been recorded in Biological Abstracts and BioResearch Index. This cumulative file now contains more than 1<sup>1/2</sup> million machine-searchable references, which is growing at the rate of about 250,000 items a year.

The creation of this file has enabled (1) BIOSIS indexes to be prepared by computer, (2) since 1965 the provision of a retrospective search service, (3) more recently, SDI services of various kinds. The SDI services are available as personal profiles, group profiles, standard profiles, and as recurring bibliographies.

The file is dynamic and its characteristics have changed from time to time, to meet among other things, changes in indexing techniques. However, any massive extension or drastic revision of the file will need to be determined by a number of factors. The introduction of full text abstracts would have many advantages but economic considerations cannot be ignored. Another major change would be related to the need for the file to be compatible with other machine-readable files facilitating the machine transferability of material.

BIOSIS together with Chemical Abstracts Service and Engineering Index is currently embarked on an overlap study which is designed to assess the duplication of coverage and to bring consideration to the question as to whether this can and should be reduced.

The argument for controlled versus un-controlled vocabularies for indexing purposes continues. BIOSIS has been combining its use of controlled subject headings and the use of natural language keywords to enhance the authors' titles. The availability of the machine-readable file has enabled an examination to begin of the natural language used, both by the authors in writing their titles and by indexers in enhancing them; some 300,000 unique character

strings were identified from the file covering the first ten years. These character strings include many synonyms and variants and a process of consolidation is continuing which will reduce substantially the number of effective words in the vocabulary. That is to say that control is being built into the vocabulary not in the customary fashion but by taking the words actually used and where possible refining their usage. Although this vocabulary refinement will be a continuing exercise it is hoped that it will shortly be possible to use the "cleaned up" list both for improving strategy building for retrospective searches and for use in an on-line editing routine.

BIOSIS embraces many subdisciplines and many specializations and the complete needs of all biologists cannot necessarily be met from the broad BIOSIS data base and from its standard form of indexing. BIOSIS is aware of its responsibilities to specialized groups and is taking steps in a number of areas to see how they can best be served. For example, Abstracts of Mycology and Abstracts of Entomology cover subject areas which do not fall within the classical classification of biology but are rather more a horizontal selection made possible by a machine-readable file. In the area of toxicology, an experimental service on magnetic tape is currently being made available with additional chemical indexing which enhances the value of the file. Something similar is being accomplished in the area of ichthyology where taxonomic indexing has particular significance. These are some examples of the approaches which BIOSIS is making towards the special needs.

A new approach is in the area of "Health Effects of Environmental Pollutants" in which an abstract journal supported by a machine-readable data base is shortly to be produced experimentally. The material for this journal will be derived from the BIOSIS file and from MEDLARS file and will, it is hoped, attain a much more effective coverage than could have been achieved by either independently. These are a few examples of the developments which are being undertaken at BIOSIS, the better to meet the needs of the life scientists.

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Most of these developments rely on the current availability of a machine-readable data base at BIOSIS. It is recognized that meeting these and other needs of biologists must be foremost in the thinking and moving towards a fully automated system.

2.8. IUBS: REPORT ON THE INTERNATIONAL UNION OF BIOLOGICAL SCIENCES

by K. FAEGRI  
IUBS Representative on the ICSU AB  
Professor, University of Bergen

The Union as such is not active in the field of documentation. Part of its activities within the field have been, during the last year, channelled through ELSE - upon which a report will be given in another session.

It should be visualized that the Union is in reality a rather loose confederation of independent units, to which must be added the four other, separate unions within what is usually referred to as the BIOS group within IUBS. Some of the constituent bodies of IUBS are active within the field, e.g. the I(nternational) A(ssociation) (of) P(lant) T(axonomists), which again is a subdivision of the Division of Botany and maintains information services in the field of succulent plants, of palaeobotany, and, well concealed, of plant cytology.

Also, within the field of botany the German-language information service is the cause of some concern.

As far as is known, no other division maintains or is responsible for information services.

The running and planned great international programs : IBP, MAB, SCOPE, etc., have naturally occupied the thoughts of the Union a great deal, even if they are administrated by independent bodies, in which the Union has a representation. The documentation problems of information systems of IBP may cause problems after the program has been discontinued.

2.9. BIBLIOGRAPHIE DES SCIENCES DE LA TERRE  
BUREAU DES RECHERCHES GEOLOGIQUES ET MINIERES  
(BRGM) DOCUMENTATION CENTRE

by Claude BEAUMONT  
General Director BRGM

It is an honour for the BRGM to welcome to day on behalf of the 'Direction du Service géologique national', the members of the International Council of Scientific Unions Abstracting Board, and I thank you warmly for coming.

Before telling you about our Documentation Centre activities, I will show you its place inside BRGM.

The French Government, or more precisely, French Governments have tried for hundred years to create several organisations in connection with underground research. Some were devoted to the geological mapping of the country, others were interested in applied mining research; some of them worked on the metropolitan territory, others in different parts of the French Overseas Union. Some twelve years ago, the French Government wanted to regroup these scattered organisations. Thus the BRGM is the result of the gathering of all means of publications on geological and mining research, (excluding research into hydrocarbides and ores used in atomic research). The oldest of these organisations now inside BRGM is the 'Service de la Carte géologique' of France created since 1868.

What are the aims of the BRGM ?

First of all, BRGM is the 'Service géologique national' of France. This name is familiar to most of you, and Mr Guillemin will tomorrow give you some details about the work done on this behalf : geological map of the national territory, gathering foreseen since 1941 in connection with French reglementation of all information concerning the metropolitan underground, research of methodological information concerning subterranean waters, engineering geology, research and

ERIC uation of mineral raw material.

BRGM is also a 'Bureau minier'. This means a conception, which although is now applied in several countries, has remained for a long time specifically French. A short time before World War II, the French Government undertook the creation of organisations supporting mining industry so as to promote the research and improvement of underground resources. The mining departments at the beginning entirely supported by the State, have units of mining research prospecting, means for the survey of the layers and treatment of ores (boring mining work). They take under their own responsibility the risks of prospecting. If successful, they enter into partnership with private companies, and could take stock shares in companies created to administrate the layers discovered or to the discovery of which they contributed. These shares allow them to keep a close connection with industry, and the revenue they get help to finance new researchs. BRGM acts alike for all mineral substances (metallic or not). Must be excepted hydrocarbides and radioactive ores, the prospecting of which is entrusted to other organisations. This put BRGM in a position which goes beyond the metropolitan territory, and entitles it to make mining research all over the world.

Missions undertaken by BRGM are very diversified, and lead the Board to participate in a large number of countries in all the fields of geology.

BRGM is what is called by French legislation a public organisation with an industrial and commercial aim.

Its mission in the national geological field makes it a public organisation.

It is an industrial organisation. It takes a risk in the field of mining research. Being a shareholder, it takes an industrial risk when it participates in above mentioned companies.

Finally, the BRGM acts as a research department as it uses the means at its disposal within the terms of the signed contracts, with governments : the French one, or more accurately French administrations, as well as foreign ones, or with private companies.

To succeed in all these missions, the BRGM has a very diversified organisation on the geographical level as well as the technical one.

Our organisation comprises about 1300 people constantly employed by the BRGM, and the yearly budget is around 135 millions Francs.

These means are administrated by two technical Boards (to which are added an administrative and financial one) :

- The 'Direction du Service géologique national', especially working on metropolitan territory, carries out the works belonging in the civil sector : its offices are in Orléans, and it has branches in several big French cities.

.. The 'Direction des Recherches minières et des Travaux' abroad, which has very numerous offices and representatives all over the world.

It is obvious that an organisation such as BRGM which is interested in all the aspects of Earth Sciences Research, and does research all over the world, must have a modern documentary department which gives all necessary information to its research scientists and engineers.

What then is the work and aim of the documentation department of BRGM ?

The documentation department of BRGM was founded in 1948; it took the place of a much older department which was specialized in paleontological documentation and housed by the Museum.

As soon as it was created, this documentation centre applied itself to study the entire geological literature of the world.

#### Functions of this documentation centre :

The two facets of the BRGM's functions are again reflected by the documentation centre :

a) Public service : the department is a national centre on Earth Sciences : it handles 30 000 documents a year.

b) It is a documentation service belonging to an organisation aimed at industry and oriented towards mining prospecting, methodology of mining research and hydrology.



### Means of the documentation centre

To enable it to do its work which goes from collecting to processing, to the release of documents to subscribers, this department is composed of :

- a translation department,
- the geological information department itself,
- a department of publications, which is a highly important help to documentation,
- a library department -- a map department ensuring documentary services to subscribers.

Finally, this documentation centre is closely working with the computing centre which produced programmes for it, which process the Bibliographie des Sciences de la Terre by computer.

The department comprises 45 people and 12 engineers. Its budget is in the range of 4 millions Francs, an important part of which comes from the selling of publications and maps.

### Achievements of the documentation centre

Since 1968 Bibliographie des Sciences de la Terre has been issued by computer. It consists of a monthly information index (authors' index, subject index, geographical index). The BRGM indexes the documents with the help of a key-word thesaurus created in cooperation with CNRS, French oil companies and French Universities.

Every year an annual index is issued which gathers all previously published information under broad geological topics.

For the BRGM own use, the documentation centre is undertaking a bibliography on internal reports and specialized researches in hydrogeology

## Studies and researches

These realizations are but a first step towards automation. The documentation centre in close cooperation with the Informatic department seeks to improve the quality of its bibliographic publications and to enlarge the documentary services related to the profession.

a) Since January 1971, the programme previously done on Bull Gamma 30 has been changed in order to be worked on IBM.

Presently, the input of bibliographic data is done in Orléans on an IBM 1130. This terminal is connected to an IBM 360/40 set up in Fontainebleau (Ecole des Mines) and serving to the treatment and output of the documentary products. The setting up of a computer 360/40 in Orléans in October 1971 will facilitate still more the treatment of documentation.

b) A special programme allows the treatment of the magnetic tapes concerning bibliographic references, thus embellishing the printing. This programme has been devoted to the 1970 yearly cumulative of bibliographic references and has appreciably improved the presentation.

c) Studies are being done to give subscribers in 1972 a selective dissemination and retrospective search service. From 300 documentary questions defined by searchers belonging to different sections of Earth Sciences, a pattern leading to the card index was created, taking into account the information demands of future clients.

d) The analysis of statistical data programmes have been adjusted to the IBM system and are now operating.

e) Processing of "Bibliographie géologique de la France" is going on and will be finished in 1972. The creation of this exhaustive card index of French geological literature will be a precious tool for the needs of the 'Service Géologique National' and could be the nucleus of a bigger international system.



## Relations between BRGM documentation centre and similar documentation centres in France and abroad.

On the national level, contacts are frequent with numerous organisations including the CNRS, mining and oil companies, university geologists and documentation centres. We work in close conjunction particularly with the CNRS documentation centre which uses the BRGM thesaurus for the indexing and treatment of the "Earth Sciences" sections of Bulletin Signalétique. At the present time BRGM and CNRS are studying a way to harmonize their documentation.

On the european level, within the framework of cooperation by national geological services, a good working partnership is being established between Earth Sciences documentation centres. This is why we reached an agreement with Bundesanstalt für Bodenforschung, Hanover, and the French thesaurus was adopted by German geologists after being translated. Since January 1971 German geological literature has been analysed and included in Bibliographie des Sciences de la Terre.

Similar agreements were reached with Czechoslovakia and Rumania; negotiations are going on with Spain and Hungary.

It is hoped that in a very short time an european network on Earth Sciences documentation will be created. As an international organisation, BRGM wishes to participate actively to the work done to promote the exchanges between the various documentation centres thus standardizing documentary work. This is why BRGM is an ICSU AB Member and wishes to participate in all the Working Groups. Also, in collaboration with the IUGS Committee of Documentation and in close cooperation with the ICSU AB, the Board is working on a multilingual thesaurus in geology.

The BRGM documentation centre is defined by its double function : on one hand as a documentation centre belonging to an organisation of research and improvement of underground resources, and on the other hand as a national and international centre on Earth Sciences as a whole.

Ladies and gentlemen I hope that I have not been too long, and that I was able to give you a rapid view of BRGM activities and particularly of its documentation centre.

I hope that the visit you will make of our scientific and technical centre tomorrow will interest you. I hope the Assembly will be successful. Thank you for your attention.

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2.10. AMERICAN GEOLOGICAL INSTITUTE

REPORT OF ACTIVITIES

by J.J. LLOYD

Director of Science Information

American Geological Institute

The American Geological Institute does not publish any secondary journals, nevertheless, it provides the largest English language indexed bibliographic service in the world covering the geosciences. GEO-REF, the Institute's automated division, acquires the primary literature of the geological sciences in all languages, annotates and indexes, and provides tape storage for the citations. Output from the tapes is distributed in various forms by the Institute's member societies, at data centers in the United States and in Canada, in libraries and on university campuses, by state geological surveys, and through the primary journals themselves.

The Geological Society of America's Bibliography and Index of Geology is a monthly publication that will contain 60,000 entries in 1972. It is delivered by GEO-REF to the Society in the forms of photocomposed camera-ready pages for printing and distribution. Tapes are distributed monthly to libraries, data centers, and universities, for S.D.I. services and retrospective searches provided by the tape lessees. Bibliographies covering topical subjects or geographical units are produced from the tapes to provide listings for publication by special-interest groups. Indexes that have been stored by GEO-REF for a group of primary publications are reformat-  
ted at the end of each year and provided to their editorial offices in time for inclusion as annual indexes to the journals in the last issue of the volume. Utilizing the same computer programs and the information in storage, GEO-REF this year produced the camera ready pages for a 10-year cumulative index to the Bulletin of the Geological Society of America.

During the year 1972 GEO-REF expects to double the number of primary publications it is providing with annual indexes. It is planning to supply the American Museum of Natural History with the camera-ready copy of a Bibliography of Micropaleontology, that will be indexed to a specificity required by research paleontologists, will be printed and distributed monthly by the Museum. Plans

are underway to increase the coverage of the North American literature in order to provide an uninterrupted flow of information that might otherwise be lost by the United States Geological Survey's decision to suspend publication of their abstract and bibliographic journals at the end of 1971.

The American Geological Institute, in addition to the bibliographic work of GEO-REF, is concerned with all areas of information transfer. Through its staff and a special committee, it is examining and seeking solutions to the problems that beset primary journal publishing in the geosciences, the structure of formal meetings, the coordination of raw data bases stored on magnetic tape, the provision of English translations of foreign geological literature, the control of informal and ephemeral information, etc.

2.11. INTERNATIONAL UNION OF GEOLOGICAL SCIENCES  
REPORT OF THE IUGS GEOLOGICAL DOCUMENTATION COMMITTEE

by L. DELBOS  
IUGS Representative on the Board  
Director, BRGM Documentation Centre

The IUGS Committee on Geological Documentation has carried on its work in two directions. On one hand the Automation Board worked on thesaurus problems, on the other hand a note was addressed to the Union's different committees and commissions concerning "reviews".

The Automation Board in connection with ICSU AB activities organized meetings on Earth Sciences multilingual Thesaurus and on classification schemes.

During the last March meeting in Paris, it was decided that the members of the Working Group should begin their work on the thesaurus by the structural geology. At the same time, bilateral cooperations have been realised inside IUGS between bFB and BRGM and a French-German edition of the thesaurus will be published.

One of the concerns of the IUGS Committee on Documentation was to prepare and publish "reviews" that is to say synthetic articles on subjects of current interest.

Of course the users need printed indexes as well as reviews, which update knowledge at any given moment.

A circular has been sent to the commissions and committees of the Union in order to precise the chosen subjects and to define the tasks of the authors.

This work is still in its early stages. We have received a certain number of replies : we hope to receive others and to develop from this inquiry, the essential points which will allow us to begin the production of new reviews.

by A.J.C. WILSON

IUCr Representative on the Board

Professor, University of Birmingham

The information services of the International Union of Crystallography were described in a report made to the Full Board meeting of the ICSU Abstracting Board at Columbus (Wilson 1970). There have been no substantial changes in the intervening year. The primary publications Acta Crystallographica and the Journal of Applied Crystallography have appeared as usual. No volumes of the secondary publication Structure Reports have been issued, though volumes 27 and 29 are in course of publication, and several other volumes are in active preparation. The volumes from 1966 onwards are to be printed by photo-offset from typescript. This process will not lead to any increase in the size of the volumes, and it has been adopted in recognition of the fact that present-day costs of typesetting are such as to make Structure Reports almost unobtainable by private subscribers. By sacrificing something in appearance, prices of individual volumes should be reduced to the level where they can again be purchased by individuals.

The two volumes of the series Molecular Structures and Dimensions mentioned at Columbus have appeared, and volume 3, "Bibliography 1969-1970 Organic and Organometallic Crystal Structures", is expected to go to press towards the end of 1971. Like volumes 1 and 2 it will be photocomposed from magnetic tapes.

The fourth special bibliography, "Diffusion des Rayons X aux Petits Angles", compiled by A.J. Renouprez, was published.

The fourth edition of the World Directory of Crystallography is at the printers.

Recommendations on the publication of powder data have been made by the Commission on Crystallographic Data (Kennard et al., 1971). The recommendations on the publication of single crystal data made in 1967 are under revision.

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The third edition of the World List of Crystallographic Computer Programs is in preparation.

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2.13. ZENTRALBLATT FÜR MATHEMATIK

RECENT DEVELOPMENTS

by U. GUNTZER

Editor-in-Chief, Zentralblatt  
für Mathematik

A new classification scheme-- the MOS classification schedule developed by the American Mathematical Society -- has been adopted for use in Zentralblatt. Because this classification is used already by many authors and publishers of primary material also outside the United States, we hope this to be a rather important step to a common classification scheme in the field of mathematics.

The system of pre-publication abstracts, described in the Proceedings of the Full Board Meeting 1970, pp. 177-178 has been expanded, notably to a number of important journals from Eastern Europe.

Work is in process towards to mechanization of the different indexes of Zentralblatt and shall hopefully be finished within the next months.



REPORT OF ACTIVITIES

by J.B. SYKES

IAU Representative on the Board  
President, IAU Commission for  
Documentation

As has already been reported to ICSU AB members (Secretariat papers 676 and 679 of 15 October 1970), the International Astronomical Union held its XIV General Assembly in August 1970, during the course of which the Commission for Documentation held a series of meetings under the presidency of Dr J.B. Sykes (who also represented the ICSU AB at the General Assembly). The Proceedings have now been published (Transactions IAU, XIVB, 1971).

The Commission recommended that the three principal abstracting journals in astronomy should be authorised to state that they are prepared under the auspices of the IAU, and this has been approved by the Executive Committee of the Union; so has the Commission's recommendation of the same scheme of transliteration of the Russian alphabet as that proposed for adoption by UNISIST and elsewhere.

The Commission further recorded its support for the ICSU AB recommendation that abstracts prepared by authors or editors in accordance with the UNESCO Guide for the preparation of authors' abstracts for publication should be published with all scientific papers.

Discussion of subject classification in astronomy has led, among other things, to the establishment of a joint IAU working group with FID for revision of the Astronomy section of the Universal Decimal Classification, taking as a basis a scheme earlier proposed by VINITI.

Compilation of a list of non-commercial publications and catalogues from observatories has now been completed, and the first edition has been published by the Utrecht Observatory. Indexes of ancient astronomical books in European observatory libraries and of serials holdings in American observatory libraries are in preparation.

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A joint meeting with other Commissions was held to discuss means of compiling, maintaining and publishing a world list of observatories, astronomers, instruments and programmes. As a result, the Brussels Observatory has agreed to compile an initial computer-printed

listing if this will afterwards be kept up to date by the various countries' National Committees for Astronomy. A circular letter has been sent to the chairmen of the National Committees, and responses so far have been encouraging.

The Union has established a permanent working group on Numerical Data for astronomers and astrophysicists, of which I am a member.

by Bill M. WOODS  
Executive Director, Engineering  
Index

Engineering Index, Inc., is pleased to join the ranks of ICSU AB and looks forward to active and fruitful participation. Engineering Index is perhaps now the oldest continuous abstracting and indexing service with service dating back to 1884. From that date until 1919 it was operated by a variety of organizations ; from 1919 to 1934 it was owned by the American Society of Mechanical Engineers. Since 1934, it has operated as an independent not-for-profit corporation with 50 Trustees as the corporation. A six-man Board of Directors determines policy which is administered by an Executive Director.

Engineering Index provides five basic services from the same data base and in three forms and three frequencies. They are the weekly printed CARD-A-LERT, a printed Monthly and a monthly tape service, COMPENDEX, and two annual services .. a cumulative bound Annual (3 volumes in 1970) and a microfilm edition of the Annual, 1884-1970. Other products are SHE (Subject Headings for Engineering) and PIE (Publications Indexed for Engineering). Subsets of the data base are sold to other organizations for packaging and marketing. Discontinued services include monthly bulletins and tapes for plastics technology and electrical/electronics engineering.

Achievements of recent years include reaching a point of near viability from sales for general operations. Grant support from the National Science Foundation is supporting a special vocabulary study in electrical/electronics engineering and for a conversion to computer type-setting.

At the same time Engineering Index has increased the number of items indexed from 53,000 in 1969 to 85,000 (or more) in 1971, and a projected 90,000 in 1972. This is nearly a 70 per cent increase in four years.

Success with COMPENDEX has been satisfying but time-consuming. Approximately 12 per cent of Engineering Index's income in 1970 was from tape sales and a one or two per cent increase is anticipated in 1971.

Engineering Index is participating cooperatively in the variety of activities of the National Federation of Indexing and Abstracting Services, in the standardization work of Z39 of the American National Standards Institute, in other professional organizations, and with the BioSciences Information Service of Biological Abstracts and Chemical Abstracts Service in a coverage study.

The abstracting and indexing business is a challenging one with many old and new problems; Engineering Index is seeking to match the correct old and new solutions to the problems.

2.16. THE AMERICAN WATER RESOURCES ASSOCIATIONS

by S.C. CSALLANY

Secretary General, American  
Water Resources Association

The American Water Resources Association feels greatly honored by its election to membership in ICSU AB.

The American Water Resources Association (AWRA) is a relatively new organization. The following brief history could serve as background information for those who are not familiar with its activities.

It was incorporated in the State of Illinois in March 1964 as a non-profit scientific organization, with Headquarters in Urbana, Illinois. A major factor in the establishment of AWRA was the need for an organization to encourage and foster interdisciplinary communication between professionals of diverse backgrounds working on all aspects of water resources problems.

The principal objectives of an Water Resources Association are:

1. The advancement of water resources research, planning, development and management.
2. The establishment of a common meeting ground for engineers, and physical, biological and social scientists concerned with water resources.
3. The collection, organization and dissemination of ideas and information in the field of water resources science and technology.

The philosophy of AWRA in regard to the need and importance of an effective information system was best described by Dr. Icko Iben, co-founder, Editor-in-Chief and Editor of Hydata in his editorial for Volume 1, No. 1, January 1965 of Hydata.

"Men have associated with each other for the achievement of common goals as soon as they had learned that planning together could speed up the process. In our time deliberate cooperation has become the most characteristic attribute of human behavior in all its manifestations. Difficulties arise only when dogmatic or ideological interpretations of methods become more important than objectives.

Development of a collective memory has accompanied the processes of association, from the beginning, especially in the epistemological and political spheres. We need to point only to the enormous masses of records in our public archives and libraries and to the fact that the monasteries were virtually the only agencies preserving the ancient writings.

The ever growing record has made bibliography - in its final scope embracing all written and printed materials extant - the most important device for supporting the memory of man if he cares to make use of it. We are in the midst of finding ways to render this device as automatic as possible, an effort especially welcomed by engineers and scientists. The key has not been found thus far, but various attempts at "stream-lining" show promise of coming upon it some day.

The principal step, then leading to a functional collective memory as automatic as planning can make it, in a given area of intellectual activity, is the preparation of bibliographies, catalogs and indexes for the literature dealing with that activity. For recent literature such efforts will yield greatest results if applied to the pertinent periodical literature.

The directors of the American Water Resources Association have come to the decision that the publication of a journal containing, in monthly installments, the tables of contents of all known periodical publications of value in the area of water resources science and technology, appearing in the

United States and other countries, should be the most useful device in achieving systematic access to the most important literature in this field. Hydata is intended to be that journal."

In that spirit and to pursue and implement the third objective of AWRA the following information system was outlined in 1965.

# FORMAT

The literature collected is disseminated in the following publications:

1. HYDATA "A monthly review and index of the world's scientific literature in the field of water resources."
  - a. The reproduction of the whole table of contents of the most important periodicals in the water resources field.
  - b. The listing of pertinent titles from periodicals not entirely devoted to water resources.
  - c. The listing of titles of non-periodical literature on water resources.
  - d. The computer-produced Key Term Index. This is an alphabetical listing of significant terms in titles. Each term is followed by a reference number. The reference number locates the title in the current issue of HYDATA where the full title is given. Terms in foreign languages are also given and they are inter-mixed with the English Key Terms.
2. HYDOR "An annual index of the world's scientific literature in the field of water resources." First to appear in 1967. It is a computer-produced annual index of HYDATA in two parts:
  - a. Key Term Index. Same as in HYDATA, but a number assigned to each Key Term locates the title in the Bibliography part of HYDOR.
  - b. Bibliography. This is both a numerical and alphabetical arrangement of titles by their senior or primary authors. Titles having no author are designated "anonymous". Abbreviated names of the reference publications conform to general usage. Reference to HYDATA is also given.

3. HYDATA READERS' SERVICE (HRS) Readers may obtain articles listed in HYDATA as reprints, xerox copies, or tearsheets (original articles).

In addition to the above service, HRS will send abstracts or summaries of articles, if available, for a nominal charge.

4. WATER RESOURCES ABSTRACTS provides its readers with abstracts in the field of Water Resources Research and Development in 50 categories. These categories follow closely the listing of the Committee on Water Resources of the Federal Council for Science and Technology.

The Abstracts presented are those of titles listed in HYDATA. A form of presentation is in accordance with the EJC information retrieval plan and also guarantees uniformity with other organizations involved in information retrieval procedures.

The WATER RESOURCES ABSTRACTS, published monthly, contains approximately a total of 150-200 abstracts in the 50 categories. An index sheet is provided with each monthly issue which shows the number of abstracts published in each category with the page numbers. Abstracts may not be published for all categories each month.

The abstracts are provided in a loose-leaf format that will allow cutting and placing on a 3 x 5 index card for filing in a normal index, card file. Six loose-leaf notebook binders are included with a volume on bond paper. Abstracts on heavy index card paper are also available, if specially ordered. Twelve binders are included with a volume on heavy index. First volume to be published in 1968.

#### 5. WATER RESOURCES MICROFILM PACKAGE

The AWRA Water Resources Film Package containing most of the 6,000-7,000 articles on water resources science and technology indexed in Hydata.

A set of Catalog Cards prepared for each article listed in Hydata and contained in the Film Package. First to be presented in 1969.



The system is based on the literature collected by AWRA. It is receiving over 300 major periodicals of the water resources field and about 2,000 nonperiodicals (reports, bulletins, monographs, etc.) each year from universities, federal and state governments, agencies, private firms, and research institutes from all over the world.

The AWRA is the only non-profit scientific association in the United States which is concerned about all aspects of the water resources and has all information services on the same subject. Consequently, one of the major aims of AWRA is to provide a comprehensive and reasonably priced information system through its publications and services for the scientific community.

AWRA is constantly exploring the possibilities to fulfill such an aim. Letter after letter has been sent to primary journals urging them to provide their table of contents in English and French besides their native language (if it is other than English and French, of course). In other letters, the Editors have been requested to provide abstracts with all papers of any scientific value. In addition, a large number of journals and reports have been requested to send copies of their publications to the library for indexing and abstracting purposes.

Admittedly such an expansion is time consuming, more and more difficult to handle the ever increasing volume of journals of only peripheral interest to water (only a few articles a year). This system is slow, cumbersome and leads to duplication of efforts. The shortcomings of such an approach have been pointed out recently during a discussion by the representatives of the National Science Foundation (NSF). It has been suggested by NSF that the most logical, least expensive, and best coverage could probably be achieved through a cooperation of indexing and abstracting services in the U.S.A. and in other countries.

AWRA should try to secure and incorporate lists of already available titles of water resources science and technology from indexing and/or abstracting services. The data collected will have to be organized.

This collected material along with the present material of Hydata will be published as a "package". It would eventually become the most comprehensive and important publication of its kind in the water field.

In summary, such a cooperation would result in:

1. Additional use of existing data presently stored by Services and
2. Savings by eliminating the need for conventional expansion
3. Savings by eliminating duplications
4. An excellent comprehensive publication.

The previously described and suggested program makes it particularly important for AWRA to be a member of ICSU AB since we believe that similar cooperative undertakings should be one of the main goals of ICSU AB. The American Water Resources Association will be glad to participate through its representatives in the works of committees or work groups to pursue the goals of ICSU AB.

Thank you once more for admitting AWRA or more precisely HYDATA and the WATER RESOURCES ABSTRACTS to the Board.

2.17. SCIENTIFIC AND TECHNICAL INFORMATION IN CANADA  
ORGANISATIONS AND ACTIVITIES

by E. HUNT  
 Assistant Librarian, Science  
 Information Services, National  
 Science Library, Canada

Historical Development

With the growth of library services in Canada, a voluntary network of co-operation was developed between these centres of information, organized to serve government departments and agencies, universities, business and industrial organizations, professional associations, and the public sector of the community. In 1927, the first president of the National Research Council recognized the need for a central scientific library that would be supplementary to other centres and serve scientific workers everywhere in the country. By providing this service, the Council hoped to stimulate and assist research at all centres of learning and also through industrial agencies. This National Research Council Library performed this role, which was recognized by the National Library when it was established on January 1, 1953, by Act of Parliament. In 1966, through a revision of the NRC Act, the NRC Library was formally designated the National Science Library.

The result of the actions so far produced the basic framework for a national scientific and technical information network which needed, however, more flesh and muscle on its skeletal bones - more formal recognition of its role, and more funds and facilities to take greater advantage of the new technology. After a number of studies, during the period 1966-68, on science and science information policies, the Science Council of Canada established a committee to examine these reports and make specific recommendations regarding a national policy for the dissemination of scientific and technical information.

The Report\* of this Committee, published in 1969, recommended as an immediate step :

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\* Science Council of Canada. A policy for Scientific and Technical Information Dissemination. Ottawa, Information Canada, 1969. 35 p. (Report No 6).

1. That the Federal Government set an example by formally adopting an information policy for science and technology.
2. That the National Research Council be designated as the agency responsible for promoting federal participation in the development of a national network of scientific and technical information services, and for the implementation of the national policy.

Included among the major objectives identified in the Report were :

1. The optimum utilization of existing information services and systems and the development of new ones.
2. The creation of an information system that can be queried in English or French with equal facility.
3. The creation of an information system that will ensure that the effect of distance from a source of relevant information on the user will be minimized.

### Organization

In December 1969, the Federal Government, following recommendations made by an NRC Task Force appointed to ascertain how its assigned role might be best carried out, directed that NRC :

1. Under the general direction of the National Librarian, develop in concert with existing information organizations, a national scientific and technical information system, to encompass the natural sciences and engineering.
2. Appoint an advisory Board of Directors responsible for formulating general policies for scientific and technical information services in Canada and for guidance toward their implementation.

An Advisory Board on Scientific and Technological Information was appointed by the NRC in July 1970. Its twenty members, representing the users, producers and processors of information, were chosen for their individual competence in the fields of science, industry and education. The National Librarian, the National Science Librarian, and a senior NRC representative serve as ex-officio members of the Board. Funds have been provided for an STI budget and a secretariat for the Board has been set up which will be strengthened by members from university faculties and other sources, appointed to carry out pilot projects and studies.

## Activities

Three units of NRC are primarily concerned with scientific and technical information : The National Science Library, the Technical Information Service, and the Canadian Journals of Research. The Advisory Board, which has met five times to date, has concentrated its attention and efforts on the NSL but will be looking at and making recommendations regarding the latter units and other important nodes in the network system across Canada.

### National Science Library

In providing national information services from a focal point in a decentralized system, care must be taken to prevent unnecessary duplication of time, money and effort, without diminishing the important contribution of special and local resource centres of information. This is especially important in Canada where size itself tends to discourage centralization. The policy for the following services illustrate this approach :

CAN/SDI In May 1969, after three years of experimentation with an SDI service to NRC scientists and engineers, the project was expanded on a national basis. The national service (CAN/SDI) operates both as a centralized and a decentralized system. Systems design, program development, reformatting of tapes and processing or search of tapes are centralized at NSL. The formulation of interest profiles and updating of profiles are largely decentralized and carried out in all parts of Canada by approximately 250 Search Editors who have been trained by NSL. In 1970/71, the CAN/SDI Project, utilizing six tape services, covering 900,000 papers per year, provided 52,000 personalized bibliographies for 2000 users (800 subscribers).

Interlibrary Loan and Photocopying An important support service for the CAN/SDI Project is interlibrary loan and photocopying facilities to provide the items of interest to researchers. If possible these services are provided locally for available material. Those not held within the region are referred to NSL which has responsibility for providing the little used material.

Union List of Scientific Serials in Canadian Libraries In co-operation with other libraries across Canada, the NSL is responsible for maintaining and publishing the computer produced Union List of Scientific Serials in Canadian Libraries. The National Library maintains the National Union Catalogue and Canadiana, Canada's national bibliography.

Health Sciences Resource Centre As a result of a recommendation to the Federal Government in November 1966, by a committee representing the Medical Research Council, the medical colleges and medical science librarians, the NSL was assigned responsibility for serving as the Health Sciences Resource Centre. This unit provides reference and bibliographical services in the medical and health sciences and co-ordinates and supports the acquisition and use of publications in these areas. Close liaison is maintained with the medical school libraries across Canada and with the federal and provincial departments of health.

In accordance with an agreement with the U.S. National Library of Medicine, the NSL has been designated to serve as the Canadian Medlars Centre. The Medlars services are an integral part of the Health Sciences Resource Centre and function co-operatively with the CAN/SDI services.

Environmental Information System In April 1970, the Federal Government agreed that the NRC be authorized, as a continuing responsibility, and in concert with other scientific organizations, to prepare and publish Scientific Criteria for Environmental Quality and to operate an STI service on Pollution. The NSL in co-operation with the NRC Biology Division, the Environmental Secretariat and other Canadian agencies is at present developing a data base storing documents relevant to environmental quality. Users of this service may request a batch search in the form of a CAN/SDI profile and, in the near future, an on-line search facility will be made available.

Information Exchange Centre In July 1970, the NRC was asked by the Federal Government to establish an information exchange centre for all federally supported university research in all the sciences. A Task Force and Advisory Committee with representatives from various government departments and agencies was established and as a result of their recommendations the IEC is being established as a unit of the STI system in the NSL.

Other Services The NSL provides an information service to supplement other Canadian information centres and a referral service for requests best handled elsewhere. Various publication services are also initiated and maintained, for example .

Directory of Canadian Scientific and Technical Periodicals  
 Scientific Policy, Research and Development in Canada  
 Problems of the North (Translation of Problemy Severa)  
 Conference Proceedings in the Health Sciences

The Canadian Index of Scientific Translations and a Depository of Unpublished Data are also maintained by the NSL.

### Technical Information Service

Established in 1945 to help small secondary manufacturing industries keep up with the rapid advance in research and technology, TIS has broadened its scope to include : Technical Inquiries, Industrial Engineering, and Technological Developments. Field officers located across Canada are usually employed in the field services of provincial research councils which receive TIS grants to cover their technical information activities.

### Canadian Journals of Research

Ten Canadian journals of research, published under the guidance of a Standing Committee of the NRC, represent the fields of biochemistry, chemistry, botany, earth sciences, forest research, geotechnology, microbiology, physiology and pharmacology, and zoology. There is an editor-in-chief for the series and each journal has its own editor and associate editors representing experts across Canada in these fields.

### Future Plans

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A national system for STI must be developed in parallel with a national system for information in the humanities, social sciences, and the arts, which is the responsibility of the National Library. As the focal point for the STI network, the NSL is working in close co-operation with the NL which has overall responsibility for the development of standards and compatible systems. Similarly other libraries across the country must be able to interface in a meaningful way with the two national libraries and with each other.



If emphasis has been given to the information activities of the STI network, which to date have been primarily concerned with the NSL, it is because these are national in scope and will have an overall effect on the system, particularly in this age of rapidly developing technology. Attention and support must and will be given by the Advisory Board to the other nodes in the total system, particularly regional and specialized centres, and to facilities for training in the field of STI. If the centralized/decentralized network is to function efficiently, advantage must be taken of the expertise and resources in existing agencies.

S E S S I O N 3 :

REPORTS FROM INTERNATIONAL ORGANISATIONS

Chairman : R.G. LACLAVERE

by A. WYSOCKI

Director, UNESCO Department of  
Documentation and Scientific  
Information

During the last ICSU AB meeting in Columbus, Ohio, Mr Scott Adams and I reported on the contents of the UNISIST Study as well as on its historical background. Therefore, I do not think it is necessary to repeat to this assembly what UNISIST represents and which are the recommendations proposed in the Study. I would only like to mention that the results of the Feasibility Study are published in two forms: the UNESCO/ICSU Study Report and the Synopsis of the UNESCO/ICSU Study Report. Both publications are available from UNESCO in English, French, Russian and Spanish. All the UNISIST recommendations compiled during the course of the study are being brought together and reproduced in microfiche form for deposit in the principal research libraries in the world. This microfiche can also be obtained from the CNRS, Paris, at the cost of \$ 21.

In my remarks today I would like to concentrate on the forthcoming UNISIST Conference and inform about the preparatory work, the agenda and the documents for the Conference :

#### Invitations to the Conference

Invitations have been issued early in March to Member States, Non-Member States who are members of other organizations of the United Nations, to organizations of the United Nations, to intergovernmental organizations and to international non-governmental organizations. Some 300 participants are expected. Only Member States will have the right to vote.

#### Organization of the Conference

The UNISIST Intergovernmental Conference, because of the complexity of the questions to be discussed, will be organized only in theenary sessions.

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The provisional agenda sent to Member States and observers proposed the opening addresses to the Conference, which will be made by the Director-General of UNESCO and the President of ICSU, then after the election of the President and of the Steering Committee, and adoption of the rules and agenda, there will be discussions on the two main aspects of the UNISIST project :

1) The needs of a world science information system, with two introductory speeches on "Science and Information in prospect" and "Science Information Today".

2) The feasibility of the world science information system, including the following points :

- UNISIST as an overall system
- Tools of systems interconnexion (Recommendations 1-6)
- Strengthening of human resources (Recommendations 7-10)
- Strengthening of human resources (Recommendations 11-14)
- Economic and political environment for UNISIST (Recommendations 15-19)
- Scientific and technical information in developing countries (Recommendations 20-21)
- Implementation requirements (Recommendation 22)

### Outcome of the Conference

The Conference will be expected to make recommendations concerning the mechanism and procedure by which Member States and International Organizations could play an active role in the implementation of the system.

This immediate short-term outcome of the Conference will be the adoption of a report embodying such conclusions and recommendations as may emerge from the deliberations.

It is suggested that conclusions may express views and findings addressed to the enlightened public to summarize the consensus of the Conference on certain problems. The recommendations, on the other hand, call for action; they may be addressed to the General Conference of UNESCO, to Member States, to the Director-General, to the United Nations and its Organizations, and to other international organizations.

Because the UNISIST Conference will have a heavy agenda to get through and will be held at a time when the Executive Board of the UNESCO General Conference will also be in session, all translation and reproduction of documents issued during the Conference will have to be done against a very tight schedule. Consequently, governments will shortly be invited to submit draft resolutions in advance. Communications received by 31 August 1971 will be translated and circulated as the Conference opens and will be discussed in the appropriate part of the Agenda.

### Government Commitment

Through their endorsement of the Recommendations of the UNISIST Report at the UNISIST Intergovernmental Conference, governments will have made a moral commitment to support the implementation of UNISIST. The bulk of the recommendations of the UNISIST Conference will most likely be addressed through the Director-General to the UNESCO General Conference which will meet for its 17th Session in October 1972. UNISIST as an international programme will then begin to function in 1973.

The Government commitment in the implementation of UNISIST will have two aspects :

- 1) a commitment to follow the courses of action proposed in the UNISIST Recommendations, as endorsed by the Conference and
- 2) a commitment to support the proposed administrative structure within the context of the UNESCO Programme and Budget.

### Conference Documents

The following documents have been sent to your Governments :

- |  |                       |
|--|-----------------------|
| - Provisional Agenda   | UNESCO/UNISIST/1      |
| - Annotated Provisional Agenda   | UNESCO/UNISIST/1 Add. |
| - Provisional Rules of Procedure   | UNESCO/UNISIST/2      |
| - UNISIST-Synopsis of the Feasibility Study on a World Science Information System              | UNESCO/UNISIST/3      |
| - General Information  | UNESCO/UNISIST/INF.1  |
| - List of Documents  | UNESCO/UNISIST/INF.3  |
| - Note by the UNESCO Secr. on the scope, competence, procedures and outcome of the Conference. | UNESCO/UNISIST/INF.4  |

During the last months, we have had the opportunity to discuss with several governments their attitude towards the UNISIST Study. We have also had the opportunity to discuss this subject and exchange viewpoints with the UN agencies, government-sponsored information services and international organizations. The general opinion on the UNISIST project is favourable. Of course, some amendments and clarifications were proposed. We hope that the October-Conference will propose to UNESCO, governments and to international organizations the necessary recommendations for the future development of scientific information and the creation of a solution to this world-wide problem.

### 3.2. WORLD FEDERATION OF ENGINEERING ORGANISATIONS

by S. JANIESZKIEWICZ  
Secretary, WFEO Committee  
on Engineering Information

As a secretary of the Committee on Engineering Information of the World Federation of Engineering Organizations I want to present, in short, its tasks and the plan of activity.

The Committee was established in the beginning of 1970 as the first working body of the WFEO, Mr D.H. Barlow was elected the Chairman.

The aims of the Committee were formed resulting from the feeling that :

1. engineers should beware of the fact that engineering information is the principal source of the technical and economical development;
2. the engineering community is responsible for the use and application of the technical documentation;
3. in order to use and apply the technical documentation, users' needs of technical documentation should be identified;
4. regular and well directed dissemination of information is essential for proper promotion of information;
5. assisting the developing countries in the field of documentation will result in considerable technical and economical progress.

Having in view the above principles which, at the same time, are the Committee's terms of reference, the Committee formulated its Plan of Activity.

The main directions of the plan are :

1. The main areas for activity should be an investigation of user's needs, a study of the information services currently available and a study of lexicographic tools.
2. There is an obvious need to avoid duplication of work being carried out by other international bodies such as ICSU, CODATA, etc., and to adapt existing models to new needs where possible.
3. The plan of work should be directed towards the dissemination of engineering, rather than scientific, information and should take into account the particular needs of engineers which differ considerably from the information needs of scientists.
4. More emphasis should be placed on the special needs of developing countries, particularly with regard to formulating guidelines for information organization in different countries, with a view to encouraging an awareness, in the governments concerned, of existing information services.
5. The Committee should take certain measures to recommend means by which users could be aware of information needs.

Recently, as a result of discussions with UNESCO, assisting the engineering society in the field of technological transfer for the purpose of development has been considered the main area of the Committee's activity.

The concept of UNISIST is based on three essential elements :  
Nature, Science and Man.

Nature, with its resources, is unfortunately exhaustible.

Science accumulates its results in documentation, whose quantity increases from day to day, and it is Man, gifted and wise, who should be charged with the task of application and use of the science for the welfare of humanity.

The main point in the task is encouraging the transfer of scientific information to everyday life for the purpose of development, and, if I may express my personal opinion, I consider this point the best basis for the future association of ICSU AB and the WFEO in the field of information.



by A.J. EVANS  
 Librarian of Loughborough  
 University of Technology

### General Introduction

IFLA was founded in 1928. Its membership consists of 81 library associations in 52 countries, 5 international library associations and 176 associate members. The accounts comprise a total amount of some 250,000 Sw.F (\$58,300).

There are "committees" for library problems and techniques and "sections" dealing with problems of particular types of libraries. The Committees are :

- Cataloguing
- Union catalogues and international loans
- Exchange of publications
- Official publications
- Periodical and serial publications
- Statistics and standards
- Rare and precious books
- Library education
- Library buildings
- Mechanization
- Bibliography
- Library theory and research

The IFLA programme for future action includes such items as : professional training, automation, the UNISIST programme, shared cataloguing, international standard book numbers, pre-publication cataloguing, reprography, preservation of books and documents. Special attention will also be given to problems of developing countries, specialized clearing houses, research in library science and documentation, terminology, library management. IFLA will also play a prominent role in the International Book Year organized by UNESCO for 1972.

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A Seminar on "The latest achievements in advanced librarianship" will be held in Liverpool on 19 - 27 August 1971 - preceding the 37th Annual Conference of IFLA.

The reports of the annual conferences, committee work and member associations are published in the "IFLA Annual". The "IFLA News" appears four times a year, and "IFLA Communications" (articles) appear in Libri. Several other publications have been issued, e.g. Bibliography of national directories of periodicals (1969), Telecode and telex address book (1966), Statement on cataloguing principles (1967) and report on International standardization of library statistics (1968).

### Research and development activities

#### A. GENERAL

##### 1. Specialised Clearing Houses

UNESCO made an attempt several years ago to set up a central clearing house for all aspects of library work in Paris but this proved to be rather too ambitious and had to be abandoned. IFLA is now making a pragmatic contribution towards the same objective but in a decentralised form. Several projects have been in operation for varying lengths of time of which some represent the normal activities of the relevant committees.

The five Clearing Houses now in operation are :

- (a) on uniform cataloguing principles, at the British Museum (Mr H.M. Chaplin in charge);
- (b) on library buildings, at the Direction des Bibliothèques de France, Paris (Mr M.J. Bleton in charge);
- (c) on libraries in new universities, at the Staatsbibliothek of Bremen (Mr R. Kluth in charge);
- (d) on libraries in large metropolitan areas, at the Central Public Library, Prague (Mr R. Malek in charge);
- (e) on official African publications, at the Staatsbibliothek der Stiftung Preussischer Kulturbesitz, Berlin (Mr M. Zehrer in charge)

These centres have been briefly described in IFLA News N° 32, 1970, April, p.3

## 2. Subjects for research and surveys under consideration

- (a) Feasibility study for the continuation of the pre-war international bibliography of the history of books and libraries (several commercial publishers are interested).
- (b) Critical lists of current research in libraries and documentation, with particular stress on mechanisation, automation and management control. Consultations with UNESCO and FID on this subject have taken place recently.
- (c) Aspects of terminology problems (Vocabularium bibliothecarium section of documentation). To be taken up with FID and the Working Group 3 on terminology of ISO/TC 46.
- (d) Availability of manuscripts in Europe for foreign scholars.
- (e) Comparative study of governmental policy-making bodies for libraries in various countries.
- (f) Library management. Improved management is a crucial need in all libraries. In view of the studies of this field being carried out in the United States, IFLA should establish with the Association of Research Libraries a method for disseminating on a world wide basis the results of work in this field. Actual use and practice will, of course, be different in each country. However, it will be useful to find out as quickly and continuously as possible the results of intensive research.
- (g) A great number of sociological aspects of the functions of libraries needs to be studied. IFLA will especially encourage research on users' needs. Careful planning should pave the way for these studies and a list of priorities established. An evaluation of research recently done in this field, e.g. in the universities of Lancaster and Durham, will be useful.

## B. SPECIFIC

### 1. Automation

At present IFLA is concerned in many activities in this field. During the International Meeting of Cataloguing Experts, which preceded the General Council at Copenhagen in 1969, a great deal of attention was given to its value for bibliographic information. The Seminar on Automation in Libraries, held last April in Regensburg and organized by UNESCO and IFLA's committee on Mechanization, covered a wide field, and a number of aspects of Marc II were discussed. At Copenhagen the committee on Mechanization decided to organize the Colloquium specially devoted to the application of the Marc II system in Europe, which was attended by experts from Europe and the U.S.A. The aims of this Colloquium were formulated as follows : the establishment of a European working Group for data processing, and of a Marc II users committee in the sense of the existing one for the U.S.A. The hope has been expressed that this Colloquium will be followed by similar meetings elsewhere in Europe which will include discussions on the utilization of tapes containing bibliographical data in Marc format, or in a format compatible with Marc, which are being produced in Germany, Great Britain, South Africa and, perhaps, Spain.

For the gradual establishment of an international network of bibliographic information in the broadest sense, the problem of compatibility is a crucial one. The present phase might be characterised as the stage of reconnoitring and of experimenting on a limited scale. The pace should not be forced, but within a few years it may be necessary to make a start with overall planning. IFLA must take a very active part in this planning and co-operate closely with UNESCO, FID, ICSU, and with other organizations as necessary. It goes without saying that other applications of automation in libraries equally deserve close attention.

As the result of a resolution of the Section of National and University Libraries (Copenhagen, 1969), a working group has been set up consisting of members of that section and of the committees on Uniform Cataloguing Rules and on Mechanization, in order to discuss common problems.

## 2. UNISIST

In determining its attitude towards the initiative of the UNESCO-ICSU Central Committee on the World Science Information System (UNISIST), IFLA had to bear in mind that this initiative covers ground which partially overlaps the field of study on which IFLA experts on cataloguing principles and automation are now engaged. It is appreciated that IFLA has now been afforded observer status with UNISIST, nevertheless it was regretted that no representative of IFLA had been invited to serve in an active capacity with the UNISIST groups which were developing plans and programs, the more so as in the opinion of several professionals, the danger of incompatibility is a grave one. It is, for instance, still an open question whether the UNISIST concepts for bibliographic descriptions, classification and thesauri will prove to be in harmony with the lines along which the most advanced thinking of IFLA experts on bibliographic standardization and on automation is proceeding.

Other areas of activity within the proposed UNISIST framework where it is felt that IFLA can offer its co-operation in a direct and positive manner are :

- (a) Periodical and Serial Publications
  - (b) Mechanisation
  - (c) Developing Countries
  - (d) Exchange of publication
- and (e) Library Education.

## 3. International Standard Booknumber and International Standard Serial Number

Although the ISBN had its origin outside the library profession the implications of both it and the ISSN are very clearly of unparalleled interest to IFLA and several of its committees. Work with ISO/TC 46 has progressed very well in this direction and will no doubt continue. Much of it is, of course, linked with the overall problem of bibliographical control which one can reasonably say has been a library problem for some 2,000 years.

## CONCLUSIONS

Because of the very wide activity of IFLA it is only really possible to conclude by making a general plea to all other associated and related bodies as are represented here. Let us all look very carefully around us before we go charging off into what we think is a new area of activity and clearly establish that no other committee or working party is or has in the past given considerable thought to the same problem. In other words, let make sure we all carry out our basic information retrieval search adequately, in the way that we try and teach others to do.

3.4. THE INTERNATIONAL ASSOCIATION OF TECHNOLOGICAL  
UNIVERSITY LIBRARIES (IATUL)

by A.J. EVANS  
President, IATUL

It is perhaps necessary in the first instance to outline the membership of IATUL and its early development before coming to the main content of this brief paper, namely the research and development activities.

IATUL was founded in 1955 at a meeting of the International Federation of Library Associations and developed most strongly during the latter part of that decade and in the early 1960's. The current situation is that we have approximately 100 member libraries scattered through 31 countries and it is only in the continent of Africa that we do not have any members. The concentration is certainly within Western Europe and the eastern part of the United States although we do have members as far afield as Tasmania, Tokyo and Madras. The main object of the Association has perhaps been in the past the exchange of ideas in all various forms between the member libraries in order to help them to develop their own identity yet to benefit from these ideas of others.

There have been many projects within IATUL in the past concerned for example with the use of microfiche, the development of audio-visual aids, co-operative cataloguing and the development and use of telex which resulted in the joint publication with IFLA of the telecode and telex address book. It is, however, perhaps more difficult in this day and age to define the real differences between a technological university and a more general university and of course it is well known that many universities are spreading their areas of interest far beyond what was originally intended. In the past decade many committees and projects of a more general nature have been established throughout the library world in such fields as information



Retrieval, mechanisation and bibliographic control to name but a few, and we have tended to partake in these rather than saying that we have a particular need to develop our own special projects. It is fair to say I'm sure that because of the origins and development of technological universities (through the Colleges of Advanced Technology in the United Kingdom and the Technische Hochschulen in Europe for example) we tend to have a rather different outlook to the traditional universities - dare I say a more pragmatic one.

One special area that was developed very fully by Dr. Van der Wolk of Delft was that of a series of seminars on the application of international library methods and techniques. Four of these were held between 1966 and 1969 and proved to be very successful. In addition to this we have held four triennial meetings which have covered such topics as library buildings and equipment, mechanisation, organisation and operation of libraries in developing countries and last year, the one held in my own university on 'Educating the Library User'. This latter area is certainly one which seems to have developed far more within the technological universities than it has in the more general ones, perhaps of course due essentially to the more defined uses in a scientific field of the library users in those particular institutions. Papers were in fact given at this meeting from both Hungary and the German Democratic Republic in Eastern Europe, the German Federal Republic and the United Kingdom in Western Europe and also from the United States.

The type of development we have been talking about most recently in the IATUL Board for future consideration is that of a much closer development between libraries that are easily accessible to one another even by telephone, or more particularly by telex for example, as may be achieved in Europe. A development which perhaps may be more closely defined as a type of referral network where the member libraries are prepared not necessarily just to provide exchange of material but exchange of information in depth and the provision of more special information that they might be particularly strong in their collections and where they have subject experts on the staff. If, for example, I had a particular query on the German chemical industry, then it would seem to me that it would be far more sensible to ask one of the German technological universities to provide this information than it would be for me on my own much more limited collection in that particular field. The one almost inevitable problem in this is, of course, that the less developed library will make considerable demands on the larger libraries who might perhaps rebel against the amount of work they are putting in to the system compared to that which they are getting out of it.



Let us look at the most recent development in which we have a very clear and defined interest and that is the development of UNISIST or the World Science Information System. There is going to be a lot of discussion on this in the coming months and indeed in the coming years, and as has already been indicated, ICSU AB is itself particularly interested in certain aspects of the proposals to be put forward at the Inter-Governmental meeting in October. Where I think such a body as IATUL can be of particular value in such a development as this is in providing a fairly well defined test bed of both people and circumstances on which various ideas emulating from UNISIST could be tried out and indeed experimented upon in some considerable depth. This is of course only one particular side of the scientific library activity and the special libraries and documentation centres both nationally and the more narrow industrial type must be considered as well. Nevertheless in such a university as mine at least which has particularly close and continuous contact with industry in all ways, then there is very little difference between us and the industrial or special library situation. We do, of course, still have students to deal with in the same way as any university but we are making very strong efforts to bridge the gap between the traditional university concept of "come and find it if you can" and the industrial attitude of almost complete and necessary spoon feeding of their scientific research workers. To achieve this end, we are, in Loughborough particularly active in three major areas, namely that of teaching both our undergraduate and postgraduate students about information problems in all its various facets, in our links with industry via what is called the Leicestershire Technical Information Service which serves industry throughout the local area, and in the fact that we carry out depth information searching for research workers and are frequently involved in the preliminaries of industrial consultancy work carried out in the university in the normal way.

If I may therefore, ladies and gentlemen, be so bold, let me say that we are prepared to make ourselves available in any way we can in that in all probability we, as technological universities probably have the most comprehensive collections of scientific and technological literature other than the national collections of course, and very often have the subject experts in the various departments and faculties throughout the university. Such people, like yourselves, are within reason very willing to cooperate wherever possible in the growing problem of information availability. Our essential aim is, and indeed must be, the better exploitation of the literature we have so readily available to us in our libraries. 95

### 3.5. ISO/TC 46 MEETING IN LISBON - APRIL-MAY 1971

by N. DUSOULIER  
ISO Liaison Officer with the  
ICSU AB.

The last ISO TC 46 meeting was held in Lisbon from 27 April to 7 May 1971.

The first week was devoted to the working groups and the working sessions of the different subcommittees and particularly to the

SC 1 Conversion of written Languages

WG 1 ISBN

ISSN

WG 2 Abbreviations and coding of names country

WG 3 Terminology of documentation and related fields

WG 4 Automation in documentation

and the second week to the plenary session. The delegates of 16 countries and observers of 10 international organizations attended this plenary session as well as Mr Raby from ISO Central Committee Geneva.

Professor Petersen from Germany was elected chairman for this meeting.

At the plenary session, ad hoc working groups were organized on the most important problems for standardization to-day :

Alphabetical arrangement

Guidelines for the establishment of thesauri

Revision of Recommendation R/214 Abstracts and Synopses

Revision of ISO R/833 Abbreviation of periodical titles

Revision of R/8 day out of periodicals

Second draft proposal on patents

Content pages of periodicals

Documentation cards

International standardization of library statistics

A tremendous amount of work was accomplished during this session and it is heartening to note that ISO people want to be really involved in UNISIST world wide programme. For this reason the first work of TC 46 was to change and redefine the scope of this committee for the future : "Standardization in the field of documentation, libraries and related information handling, including information systems and interchange networks as applied to documentation. Liaison shall be maintained with ISO TC/37, 42, 95, 97, 130 and with relevant documentation sections or committees and international organisations".

I just want to give you the most important points dealt with at this session :

1)- For the SC 2 apart from the work on traditional conversion of written languages (Hebrew, Yiddish, Arabic, non-slavic cyrillic, Japanese, Chinese) it was decided that ISO TC/46 recommends that SC 2 undertake to examine conversion standards in view of preparing other systems without diacritics for transfer in machine readable form.

2)- I will not speak about ISDS as you already have all relevant information and I prefer to tell you about WG 2 on country codes :

It was decided that WG 2 will prepare a draft recommendation for the representation and coding of country names which will include a list of countries, and alphabetic code and a numeric code to be designed in close cooperation with TC 97/WG K. The requirements, use and design of the final ISO document will be decided in close cooperation with interested international organisation and other ISO technical committees.

WG 4 has prepared a provisional technique for block spanning, suitable for bibliographic information interchange, and has decided to organize a task group to define character sets for bibliographic use, specify for various input devices those character subsets required for bibliographic purposes and to act as liaison body with other technical committees.

Another task group should be set up within WG 4 to deal with content designators and associated problems, and also with filing arrangements for catalogues and other bibliographic listings.

WG on thesauri : the ad hoc WG on thesauri takes note of the fact that many agencies in many countries have either built or are about to build thesauri for their own purposes. The ad hoc WG believes that the transfer of information requires a standard set of rules for the construction of thesauri. These guidelines will be useful for the construction of thesaurus in a single agency, they will also facilitate the transfer of information between agencies. In order to avoid duplication of work, the WG believes that the guidelines should be constructed in close cooperation with other agencies working on the problem especially at UNESCO. It was resolved that the German and French members and UNESCO should jointly prepare a draft proposal based on available documents at that date (UNESCO guidelines, German proposal and comments from France, USSR, Romania and INFCO).

Abstracts and synopses. As Stella Keenan said this morning, the WG on revision of ISO R/214 decided to accept the document submitted by the U.S. (ANSI standard) and revised at the Lisbon meeting, as an ISO draft recommendation for abstracts to be submitted to members for voting

The WG on abbreviations of periodical titles decided that the list of abbreviations of words prepared by the UNISIST/ICSU AB/WG on bibliographic descriptions should circulate as a draft ISO recommendation, preceded by an introduction stating particularly its relationship to ISO TC/46 965 Revision of ISO R/4. However certain items will be deleted from the document :

place, names and abbreviations  
anonyms

Other points dealt with are not of great interest for this assembly and if some of you wish for more detailed information it is possible to obtain the proceedings of the meeting from ISO TC/46 Secretariat at DNA in Berlin.

### 3.6. OBJECTIVES, AIMS AND STRUCTURE OF CODATA

by Ch. SCHAFER  
Executive Director , CODATA  
Central Office

Although the members of CODATA and the National Data Committees for CODATA are not information experts, but rather active and recognised scientists in their fields, the work of CODATA will nevertheless be considered as having an important role to play in any future information system. This evolves from the fact that CODATA deals with factual scientific information, such as numerical, quantitative and systematic data, with emphasis on the critical evaluation of this information.

At present documentalists and information scientists are almost exclusively concerned with the accessibility aspect of the literature, which involves topics such as abstract preparation, automated indexing, bibliographic standards, storage and retrieval, etc.

These topics, however, cover only the first two of the following four steps associated with information activities.

<u>Activities</u>	<u>Products</u>	<u>Field</u>
1. Collection of literature	bibliographies	Documentation and Information
2. Abstracting, indexing	annotated bibliographies abstracts, indexes, retrieval systems	
3. Extraction of facts and data	uncritical data compilation state-of-the-art-reports	Science (CODATA)
4. Data and information evaluation	Critical data compilations critical reviews recommendations correlations	

Although these activities are of great importance and require international cooperation and standardization, the extraction, compilation and evaluation of data is of equal or greater importance to the user. The user requires direct access to the results of scientific research and furthermore to accurate, reliable and valid data. Unfortunately, at present too much information in the literature is of doubtful validity, superseded or even wrong.

With the exponential growth of scientific information, the compilation and evaluation of data must be of vital interest to the information scientist, as well as to the user, if existing and future information services are not to be completely overloaded. The elimination of unreliable and superseded information will ease the growing burden on information services.

The quality aspect of information i.e. the accuracy and reliability of the scientific content of the literature is the main concern of Data and Information Analysis (Evaluation) Centres, where data and information from a specific and limited field of science are collected, evaluated and distributed. It is here that the information producer, the working scientist, in the role of evaluator, interacts again with the information before it is channelled to the user.

The double compression of literature by extraction and evaluation of data with the subsequent increase of the density of useful information is an encouraging step to cope with the mass of produced literature.

CODATA is the only international interdisciplinary organisation dealing mainly with these aspects of data compilation and evaluation.

#### Purpose and Objectives:

The general purpose of CODATA is to promote, encourage and coordinate on a world-wide basis, the production and distribution of compendia and other forms of collections of evaluated numerical, and other quantitative as well as systematic scientific data.

To accomplish this goal CODATA directs its attention to the following tasks:

1. to ascertain on a world-wide basis through the appropriate Unions and national bodies
  - (a) what work on critical compilation of evaluated numerical data which is being carried on in each country;
  - (b) what work is being sponsored by each Scientific Union or by other international groups;and
  - (c) what the needs of science and industry are for additional compilations of evaluated data;
2. to achieve coordination among, and strengthening of existing programs in such a way as to maximize their effectiveness, to minimize unintentional or undesirable overlap, and to recommend new compilation programs when necessary;
3. to encourage the support of needed work by appropriate private, governmental, and intergovernmental agencies; and to encourage needed experimental work;
4. to encourage the use of nomenclature, symbols, and constants advocated by the responsible Unions; and, when desirable, uniform editorial policy and procedures for presentation of information;
5. on a world-wide basis,
  - (a) to stimulate wider distribution of compilations of high quality;
  - (b) to maintain and distribute a directory of continuing data compilation projects and related publications; and
  - (c) to encourage adequate indexing of the substances and properties covered by all such compendia;
6. to encourage and coordinate research on new methods for the preparation and dissemination of critically evaluated tables generally expressed in numerical form.



### Scope of CODATA

Until recently the scope of CODATA was restricted to numerical data of properties of well-defined substances and materials, i.e. mainly to the field of chemistry and physics.

On request of some CODATA member unions in the geo- and bio-sciences as well as on recommendation of the ICSU Officials CODATA at its General Assembly in July 71 in Washington, D.C., U.S.A., decided to broaden its scope and to include in its activities the overall coordination of critically selected numerical and other quantitative scientific data not only of numerical property data of substances and materials but also of time and/or location dependent quantitative as well as systematic scientific data (environmental data).

For this purpose CODATA will recommend to the member unions the establishment of Data Commissions within their unions. CODATA will in principal have its own Area Task Groups only in interdisciplinary fields. It will give emphasis, however, to those aspects common to many or all unions, such as computer use and telecommunication, presentation of data in the primary literature, publication and dissemination of evaluated data, terminology and classification, access to raw data, etc.

### Structure and Operation:

Founded: 1966 by the International Council of Scientific Unions (ICSU).

### Membership:

National Members - 15 National Representatives from Australia, Canada, France, German Democratic Republic, Germany, Fed. Rep., Israel, Italy, Japan, Netherland, Poland, Sweden, Switzerland, U.K., U.S.A., U.S.S.R.

A condition for national membership is the establishment of a National Data Committee for CODATA to advise and support the national representative.

Union Members - 10 International Scientific Unions in the fields of Pure and Applied Chemistry, Crystallography, Astronomy, Pure and Applied Physics, Biophysics, Biology, Geophysics and Geodesy, Geology, Geography, Theoretical and Applied Mechanics.



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For the Union Members similar structure has been proposed and it is hoped that in future all Unions will establish Data Commissions to stimulate and coordinate data compilation and evaluation activities within their field of concern.

Co-opted Members - Dr. Guy Waddington

Associate Organizations - Only recently CODATA decided to provide the possibility to associate scientific organizations active in data producing or in data evaluation (data centers).

Corporate Associates - for commercial enterprises (industries, publishers).

Liaison links are maintained with other international organizations including FAGS, FID, IAEA, ICSU AB, ISO, OECD, UNESCO, WFEO, and WMO.

#### Task Groups:

To fulfil its coordination role, CODATA relies on the work of Task Groups in specific scientific areas or for general problems.

The following Task Groups are in operation:

##### A. Area Task Groups:

Key Values for Thermodynamics

Publication: Tentative Set of Key Values for Thermodynamics - Part I, CODATA Bulletin 2, 1970. Part II, in press.

Data in chemical Kinetics

Publication: A Catalog of Compilation and Data Evaluation Activities in Chemical Kinetics, Photochemistry and Radiation Chemistry, CODATA Bulletin 3, Oct. 1971.

WFEO/CODATA Working Group on Engineering Data

Established in March 1971.

## B. General Task Groups:

### Computer Use

Publication: Automated Information Handling in Data Centers, CODATA Bulletin 1, 1969. 2nd edition: to be published in November 1971.

### Fundamental Physical Constants

A Tentative Set of Fundamental Physical Constants is expected to be published in Summer 1972.

Presentation of Data in the Primary Literature  
Established in July 1971.

Improvement of Accessibility to Evaluated Data  
Established in July 1971.

## Central Office:

A small office has been established to implement the policy and decisions of CODATA. It is located at Frankfurt/Main, Fed. Rep. Germany. The Office is in charge of the preparation of:

1. International Compendium of Numerical Data Projects.  
This "Handbook of Data Handbooks" was published in 1969, and describes numerical data projects and their publications in 26 countries mainly in the physical and chemical fields. A detailed index provides access to the content of the many hundreds of listed data compilations with a total of 240,000 pages.
2. CODATA Newsletter, which reports on new data activities and provides a vehicle for communication between compilers, evaluators and users of scientific data.
3. CODATA Bulletin, for reports of CODATA Task Groups.
4. International CODATA Conferences on the Generation, Collection Evaluation and Dissemination of Scientific Data.  
The 1st Conference was held 1968 in Germany, Fed. Rep., and the 2nd Conference in Scotland 1970. In 1972 France will be the host country of the 3rd Conference.

Finances:

The budget of CODATA (approximately \$100.000 for 1971) for staffing and maintenance of the Central Office and for expenses associated with the Bureau and Task Group meetings, is covered by fees from the national members and to a lesser extent by grants from ICSU and contracts with UNESCO.

3.7. ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)

by P. JUDGE  
Head, OCDE Scientific and  
Technical Information Section

MAIN AIMS AND OBJECTIVES

The aims and objectives of the Organisation are :

- To achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy.
- To contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- To contribute to the expansion of world trade on a multilateral non-discriminatory basis in accordance with international objectives.

In order to achieve these aims, the Organisation functions primarily as a forum for key policy officials of Member governments, as a producer of knowledge and as a workshop for building that knowledge into co-ordinated policies through a permanent exchange of views.

All Member countries contribute to the production of knowledge by supplying the most complete statistics available and by providing extensive information on their policy plans and experiences. By working out their common policy problems together on the basis of such knowledge, they have brought into existence a new economic diplomacy characterised by consultation, co-operation and mutual criticism.

One important set of activities carried out by OECD stems from a deepening understanding of the contribution that science can make to the growth of industrialised countries as well as to the development of societies that are economically less advanced.

Investment in science, it has become clear, is investment in growth. But if this investment is to bear fruit, it must be guided by a painstakingly acquired knowledge of the economic ramifications of scientific activity and by rationally formulated policies - in a field where the very notion of "policy" has only recently taken root.

In the specific scientific and technological fields, OECD aims at promoting the development of Member countries resources, encourages research and promotes vocational training.

#### ORIGIN OF THE ORGANISATION AND PRESENT NUMBER OF MEMBER COUNTRIES

The Organisation for Economic Co-operation and Development began its official existence on 30th September, 1961. At that date it succeeded its predecessor, the Organisation for European Economic Co-operation (OEEC), whose original 1948 tasks - the administration of Marshall Plan Aid and the co-operative effort for European recovery from the economic disaster of the Second World War - had long been completed, though many of its activities had continued or had been adjusted to meet the needs of European economic expansion. Thus, the successful economic co-operation which had grown up among the European countries of the OEEC was extended so as to include Canada and the United States.

The present number of Member countries is 22. Furthermore, another country, Yugoslavia has a special status : it is a full Member for confrontation of economic policies, scientific and technical matters, agriculture and fisheries questions, technical assistance and productivity, and has observer status in other matters.

#### ORGANISATIONAL STRUCTURE

The component bodies of the Organisation are :

- The Council, or supreme body of the Organisation. It is composed of representatives of all Members and meets from time to time at Ministerial level and regularly at Permanent Representatives level; in either case, it exercises similar powers. The Council is the body from which all general or administrative decisions taken by the Organisation are derived. It acts by decisions, agreements, recommendations and resolutions. The powers of the Council are exercised in accordance with the role of unanimity.

- The Executive Committee, which consists of representatives of the Members designated annually by the Council. The Committee normally meets ~~once~~ a week. Questions to be submitted to the Council, whether relating to the general policy of the Organisation or to the progress of its work, are first examined by the Executive Committee, which is not, however, competent to take decisions, except on the activity of the Council, and can act only in accordance with the instructions and directions of the Council, to which it must report. It may be called upon by the Council to carry out specific tasks.
- The Budget Committee
- Specialised Committees, which undertake the studies of which they are charged by the Council or by the Executive Committee. They are able to study any question related to their specific fields of interest and they also may create, to accomplish their tasks, Working Groups and Sub-Committees. They report either to the Council or to the Executive Committee. Among the specialised committees existing at present, mention may be made of the Scientific Policy Committee, the Research Co-operation Committee, and the Scientific and Technical Personnel Committee, whose secretariat is provided by the OECD Directorate for Scientific Affairs.

#### ACTIVITIES IN THE FIELD OF INFORMATION AND DOCUMENTATION

In the Directorate for Scientific Affairs, particular attention is paid to the development and co-ordination of the science policies of the Member countries, and as an important part of these, to national policies for scientific and technical information.

OECD work in Information Policy began in 1965, aiming particularly at an identification of the elements of national information policies, and at reaching a common understanding among its Member countries to facilitate international co-operation in this field. The early work in the Information Policy Group was presented before the Third Ministerial Meeting on Science in March 1968, at which time the Ministers recommended that Member countries should take appropriate steps to establish a high-level focus for promoting and co-ordinating international activity in the field of scientific and technical information.

The Ministers also confirmed the broad mandate of the Information Policy Group, emphasising the need for harmonising information systems.

The programme of the Information Policy Group has therefore been developed along the lines suggested by the Ministerial discussion, and now includes the following activities :

I. Activities directly linked to Information Policy :

- Identification of the government responsibilities for national information activities ;
- A study of the functions of the "national focus" for information which was recommended by the Ministers, and which is already being considered in many Member countries ;
- A description of the institutional and management arrangements in different Member countries for government policy action in information.

Considerations of national policies are also being extended to see how these may contribute to international co-operation, in relation to specific fields and systems. OECD is particularly concerned to ensure an effective co-operation with other international organisations, and wishes to maintain close contacts with them, e.g. by participating where appropriate in their working groups. OECD has issued the present compendium on "Information activities of major international organisations" largely with the idea of facilitating the effective use of results obtained in one organisation by others who may be interested.

II. Studies of functional aspects of information systems

In response to the Ministers' request, a working group has begun to study questions of systems interconnection; these are considered to include not only the problems of hardware and software compatibility, important though these may be, but also the intellectual problems related to the systems philosophy, information service objectives, the availability and kind of training for the specialists operating the services, and so on. In this Panel, it is intended that

experts from Member countries will contribute their knowledge of these problems, and that representatives from other interested international organisations will also be invited to discuss their programmes in related fields.

### III. Action promoting practical co-operation on systems

OECD is concerned at the moment with promoting international experiment and co-operation with a number of large national systems, for instance MEDLARS and Chemical Abstracts Services, among its Member countries. Technical discussions have been held on the INSPEC (Information Service for Physics, Electro-technology and Control) system, to see if this may be another suitable case for this kind of collaboration. Experience in these discussions in OECD has already been of value to Member governments in identifying the kind of problems that arise in international co-operation in this field, and the management arrangements that governments need to institute at national level to make this co-operation most effective.

In addition, activities which began in relation to particular systems are now leading to a broader study of the information needs of scientific disciplines or technological missions. For example, growing interest in the MEDLARS system has prompted a look at the information requirements in the field of biomedicine, more generally. Other work is developing in relation to technical information for industry, where a meeting of government officials to discuss their responsibilities in this field, and the issues which they find important, is planned for late 1969. Exploratory work has also started in relation to information services for the social sciences.

Besides this work on Information Policy, the Committee for Co-operative Research, through the Co-operative Research Group on the Biological Deterioration of Materials, has been closely connected with the development of a Biodeterioration Information Centre in Birmingham. This centre has incorporated the information reference scheme originally set up by the OECD group, and published the International Biodeterioration Bulletin\* twice yearly. The Bulletin includes (i) articles on recent research results before they are published in technical and specialised journals, and (ii) a bibliographical reference scheme,

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giving some 1,000 classified and indexed titles per issue, drawn from several hundred technical journals and sent into the Centre by co-operating scientists from the world over. The classified articles are kept at the Centre and copies can be made available on request. Furthermore, each article is key-worded and coded so that the Centre can meet requests for any bibliographical enquiry on biological deterioration research.

The Water Management Research Group, which likewise comes under the Committee for Research Co-operation, is also concerned with the problems of the selection of documentation and information in its own field. This Group is composed of senior government officials responsible for the principal policies of water resources management in their countries. Recognising that the administration which they represent must necessarily rely upon the most precise, complete and up-to-date scientific information which can be obtained, in order to carry out their various tasks, the Group members considered that there was an urgent need to ensure that information on research should be made readily available to those engineers and administrators responsible for water management. The Group decided, in the first place, to study the possibility of exchanging abstracts of articles so that, by avoiding the analysis of the same material in several countries simultaneously, the present amount of work could be reduced. The principle of sharing between countries the work of abstracting and indexing was agreed. Each Member country would be responsible for analysing and abstracting information produced at home, or in its own language, and for sending the relevant details to the other Member countries. The practical difficulties of putting an international scheme of co-operation of this kind into effect, are being studied at present.

A Road Research Programme, is responsible for a scheme for the international co-ordination and exchange of road research documentation (IRRD-International Road Research Documentation), designed to meet the needs of research workers rather than those of practising engineers and road-builders. A systematic exchange of information sheets has been set up between OECD Member countries; working agreements have been reached with the United States Highway Research Board which has a similar system for information retrieval, and with the International Road Federation as concerns information research in progress in non OECD Member countries. An alphabetical list (thesaurus) in each of the three official languages adopted (English, French and German) has made it possible to unify methods of identifying,

recording and retrieving information. A co-ordinating laboratory is responsible for the circulation of information sheets, including analytical abstracts, for each of the official languages.

### Directorate for Industry and Energy

The Organisation is keeping in close touch with developments in the fields of industry and energy through its Committee for Industry and Energy which examine Member countries' industrial and energy policies as well as problems which need the co-operation and confrontation of Member Governments. These two Committees are helped by five Special Committees competent for the most important branches of manufacturing industries and the Special Committee for Oil, which review trends and prospects in their respective sector's situation and structure. In the case of International crises, these Committees are able to act, as the Special Committee for Oil has already done twice, in the sense of mitigating any possible consequences of an interruption in the normal supply of raw materials to Member countries. The reports and statistics published regularly under the auspices of these Committees cover energy as a whole as well as most of the important branches of energy producing and manufacturing industries : oil, electricity, engineering and shipbuilding, chemical products, textiles, iron and steel, pulp and paper, timber, tropical timber, hides and skins, cement.

### OECD Development Centre

The OECD Development Centre was set up with the following objective : "to bring together the knowledge and experience available in participating countries of both economic development and the formulation and execution of economic policies; to adapt such knowledge and experience to the actual needs of countries or regions in the process of economic development and to place the results by appropriate means at the disposal of the countries concerned".

The Development Centre pursues six main lines of action towards this end :

1. Research on certain problems of major concern to developing countries, undertaken both in the interests of these countries and Member countries which are willing to supply them with effective

aid. Two research projects are worthy of note as forming part of the Centre's long-term work; the first - about to be completed - concerns industrialisation, its purpose being to work out methods of promoting industrial development on the basis of detailed case studies; the second - whose implementation has just begun - concerns the problems of employment and economic development that will confront the developing countries over the next decade or two arising from the present population explosion. One goal of the study is to point to the size of the problem so as to alert both the countries and the donors of aid as to its magnitude; at the same time, though, the study is intended to point to the theoretical and practical policy implications for development arising from the accelerated increase in the size of the labour force. Other research deals with such specific problems as the improvement of statistics in the field of national accounting in the developing countries.

Recently the Centre has published the following studies :

- " Foreign Aid Policies Reconsidered " (G. Ohlin)
- " Aid and Indebtedness " (G. Ohlin)
- " Population Control and Economic Development " (G. Ohlin)
- " Foreign Skills in Economic Development " (A. Maddison)
- " Foreign Skills and Technical Assistance in Greek Development " (A. Maddison)
- " International Comparisons of Real Income " (W. Beckerman)
- " The Determinants of Financial Structure " (R. Goldsmith)
- " The Financial Development of Mexico " (R. Goldsmith)
- " Reflections on Nigeria's Economic Growth " (A. Lewis)
- " The Local Currency Proceeds of Foreign Aid " (A. Lachman)
- " Decision Making in the Development Field " (R. Buron)
- " Transport Problems in West Africa " (S. Kobe)
- " Supply and Demand prospects for Chemical Fertilisers in Developing Countries "
- " Manual of Industrial Project Analysis in Developing Countries " (Vol. 1)

as well as a series of bibliographies, conference proceedings and directories of development institutions.

2. The organisation of field seminars and conferences on development problems. Seminars for economic policy-makers were organised from 1964 to 1968 in the following countries : Cameroons, Guinea, Ivory Coast, Chile, Ecuador, Peru, Ceylon, Iran, and dealt with such general problems as industrial and agricultural development, promotion of regional co-operation, balance of payments problems, investment, fiscal and monetary policies, etc.

3. The communication of specific experience gained by the OECD in various fields of human resource development. A number of sessions, followed by missions of experts, have been organised, principally in Latin America and in the Middle East on the relationship between long-term economic objectives and educational planning. Various "transfer of experience" activities in the spheres of industrial and agricultural productivity have been carried out in Asia, Africa and Latin America, as well as on assistance to small firms and small farms. A recent Meeting of Experts, jointly organised with the Directorate for Scientific Affairs, has focussed on "The Role of Science and Technology in Development".

4. A Development Question and Answer Service has been set up for passing on, with the help of international organisations and a number of national services, the available documentation which may help to answer specific questions put by developing countries; international co-operation in the field of automatic storage and retrieval of documentation is being promoted on the basis of an "Aligned List of Descriptors" worked out jointly by the Centre, certain international organisations of the United Nations family and national institutions.

5. A liaison between development research and training institutes by means of meetings of directors of these institutes and the publication of research and training directories and of a quarterly Liaison Bulletin.

6. A recent addition to the programme of the Centre deals with research, documentation and exchange of experience in the field of population.

## ENEA - European Nuclear Energy Agency

The European Nuclear Energy Agency is a specialised Agency of OECD, created in 1957 to help the Organisation's Member countries in developing the peaceful uses of atomic energy. As its name suggests the Agency is predominantly European, the 18 European members of OECD being full members of ENEA, while Canada, Japan and the United States are associated countries.

The main objectives of ENEA are :

- creation of joint undertakings;
- establishment of scientific and technical co-operation and common services;
- unification of legal and administrative rules and practices;
- study of economic aspects of nuclear energy.

This work is carried out under the direction of the Agency's Steering Committee, which comprises senior representatives of the national atomic energy commissions or other competent authorities in Member and associated countries, as well as a representative of Euratom. The Steering Committee is assisted by sub-committees, study groups and an international secretariat.

ENEA has set up two specialised information centres as common services operating on behalf of all those Member and associated countries wishing to participate.

The first of these, which is located at the Euratom Joint Research Establishment at Ispra (Italy) is a Computer Programme Library which collects, standardises, edits and diffuses summaries of computer programmes available for nuclear research, as well as supplying complete programmes on request.

The second common service, the ENEA Neutron Data Compilation Centre to collect and classify neutronic data and to distribute available for use by research workers.

These two centres make extensive use of electronic computers for both storage and processing of the specialised information with which they are concerned.

In the specialised fields of food preservation by irradiation and isotopic generators, ENEA co-sponsors, with the French Commissariat à l'Energie Atomique, quarterly Newsletters dealing with progress not only in OECD countries but in virtually all countries where research in these fields is being carried out.

ENEA's own information publications include regular reports on the activities of the Agency's major joint undertakings ( the Halden and Dragon experimental reactor projects, and the Eurochemic Company for reprocessing irradiated fuel); similar reports on the work of the Computer Programme Library, the Neutron Data Compilation Centre, and specialised reports following studies of particular subjects (e.g. world resources of uranium and thorium).

Conferences and symposia on specialised topics in nuclear science and technology are arranged by ENEA and their Proceedings published.

Name of system: COMPUTER INDEX FOR NEUTRON DATA

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Official Abbreviation: CINDA

---

Address: CCDN/NDCC B.P. 9, 91 Gif sur Yvette, France

---

Telephone: 9517333

---

Telex: CECODON 69920F

---

Cable Address: EURONUCLEAIRE GIF SUR YVETTE

---

Sponsor or controlling body: ENEA of OECD, CCDN Committee: Austria, Belgium, Denmark, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom

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total staff: 18 Total CCDN, which has more activities than the  
Approximate annual budget: F.F.2,400,000. described systems NEUDADA and CINDA  
Date of first operation: 1964

---

A. AREA AND PURPOSE OF SYSTEM

Area covered: Publications in the field of neutron physics: theoretical work, experimental work, compilation, evaluation

Purpose of the System: Quick survey about existing literature for data evaluators, neutron and reactor physicists

Kind of co-operation with other information systems: Completeness check of part of the system against NEUDADA

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B. INFORMATION INPUTS

(1)	<u>Source</u>	<u>Coverage</u>	<u>Language</u>
	Journals reports, theses, books, conference proceedings	Since 1932	English.

(11) Digested information from other systems: A second master file is held at DIIE of UNAEC at Oakridge. Exchange tapes. Entries prepared or collected by NDS of IAEA or CID of USSR State Committee are entered at CCDN

---

C. RECORD CONTENT

	A*	B*	C*
Authors	X	M	
Source	X	M	S
Title i.e. original title			
Abstract originated at source			
Abstract originated by system			
U.D.C. or similar "universal" code			
Classification code common to area covered			
Classification code peculiar to system	X	M	S
Keywords, descriptors, terms	X	M	S
Full text			

\* A: X = the item is present in the record  
 \* B: M = the item is mandatory for output  
 \* C: S = the item is used for search  
 A = the item is available for search

Classification basis used: CINDA classification

D.

MECHANISATION BASIS

Media used for total record: Computer  
Media used for the search record: Computer  
Computer based:  
Configuration: IBM 360/30 64 K bytes QS

Minimum configuration required to search the files for retrieval purposes or to replicate the system performance elsewhere:

Reprographic methods used to distribute the output of the system: Since early 1971:

Computer line printer/offset printing  
Automatic photo type setting

E.

OUTPUT TO USER

Output options available: Only total entry can be retrieved

Machine-readable format in which output is available: Exist. no name

F.

USAGE INFORMATION

Availability of the system:

Charge basis to users: No charge

Estimate of input of citations: 70,000

Estimate of output of citations: Retrievals rather seldom. Publication of total content - see D.

G.

RECENT OR PLANNED DEVELOPMENTS

REFERENCES

CINDA Reader's Manual  
CINDA 69  
CINDA 69 supplement 1  
CINDA 69 supplement 2

CCDN - CI/21 January 1968  
May 1969  
January 1970  
August 1970



**Name of System:** NEUTRON DATA SYSTEM FOR DIRECT ACCESS

**Official Abbreviation:** NEUDADA

**Address:** CCND/EDCG, B.P.9, 91 Gif-sur-Yvette (France)

**Telephones:** 951 73 33

**Telex:** CECODON 69920 F

**Cable Address:** EURONUCLEAIRE GIF-SUR-YVETTE

**Sponsor or controlling body:** ENEA of OECD, CCND Committee (Austria, Belgium, Denmark, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom)

**Total staff:** 78

**Approximate annual budget:** 2,400,000 French Francs

**Date of first operation:** 1.8.1968

Total CCND, which has more activities than the described systems NEUDADA and CINDA

**A. AREA AND PURPOSE OF SYSTEM**

**Area covered:** Numerical results of neutron physics experiments (carried out in Western Europe or Japan) information from neutron induced reactions

**Purpose of the System:** Basis for data evaluators, neutron and reactor physicists

**Kind of co-operation with other information systems:** exchange with NNCSC of USAEC, NDS of IAEA, by translation from/to EXPOR CID of State Committee USSR

**B. INFORMATION INPUTS**

(1)	Sources	Coverage	Language
	Journals, reports, thesis, books Conference proceedings, private communications	No year limit for the past	English

**(11) Digested information from other systems:**

Same information from SCISRS (NNCSC) resulting from experiments in USA and Canada  
(See A) (CID) resulting from experiments in USSR  
DASTAR (NDS) resulting from experiments in other parts of the world

**C. RECORD CONTENT**

	A*	B*	C*
Authors	X	O	S
Source	X	M	S
Title: i.e. original title	X	O	A
Abstract originated at source			
Abstract originated by system	X	O	
U.D.C. or similar "universal" code			
Classification code common to area covered			
Classification code peculiar to system	X	M	S
Keywords, descriptors, terms	X	O	
Full text			

\* A: X = the item is present in the record  
 \* B: M = the item is mandatory for output  
 O = the item is optional for output  
 \* C: S = the item is used for search  
 A = the item is available for search

**Classification basis used:** SCISRS - classification/after translation EXPOR - classification

D.

MECHANISATION BASIS

Media used for total record: Computer

Media used for the search record: Computer

Computer based

Configuration: IBM 360/30 64 k bytes DSS

Minimum configuration required to search the files for retrieval purposes or to replicate the system performance elsewhere:

Reprographic methods used to distribute the output of the system:

E.

OUTPUT TO USER

Output options available: 1) index only  
2) data only  
3) data and descriptive information

listings  
listings, tapes, cards, plots  
listings, tapes, cards, plots

Machine-readable format in which output is available: CALCUL

F.

USAGE INFORMATION

Availability of the NEUDADA system: to users in Western Europe and Japan; others via NNOSO, NDS and GID

Charge basis to users: no charge

Estimate of input of citations: 1,300,000 data points with additional descriptive information

Estimate of output of citations: 1,500 data points with additional descriptive information per day

G.

RECENT OR PLANNED DEVELOPMENTS

REFERENCES

NEUDADA system description  
Data Index  
Data Index

CCDN/SYS-2  
CCDN-NW/8  
CCDN-NW/11

April 1969  
March 1969  
October 1969

Compiled by OECD

Automatic Documentation Section, Development Enquiry Service,  
O.E.C.D. Development Centre.

Name of System or Service

Official Abbreviation: AUTODOC

Address: 94 rue Chardon-Lagache, Paris XVI, FRANCE.

Telephone: JAB 6519

Telex:

Cable Address:

Sponsor or controlling body: OECD 2, rue André-Pascal, 75-Paris 16e (France)

Approximate total staff: 5

Approximate annual budget:

Date of first operation:

# AREA AND PURPOSE OF SYSTEM

A.

Area covered: Economic and Social Development

Purpose of the System: Computer storage and retrieval of OECD documents, development of (1) capacity to process input from compatible systems (2) common retrieval language (3) a documentary software package that can be adapted to various hardware systems.

Kind of co-operation with other information systems:  
Software exchange; language development; training in analysis and programming; system application in other environments.

# INFORMATION INPUTS

B.

(i)	Sources	Coverage	Language
	OECD	Economic and Social Development	E/S
	FAO	Agriculture	E
	ILO	Labour	E

(ii) Digested information from other systems:

C.

# RECORD CONTENT

	A*	B*	C*
Authors	X	M	
Source	X	M	
Title i.e. original title	X	M	
Abstract originated at source if input from other systems	X	M	
Abstract originated by system	X	M	
U.D.C. or similar "universal" code			
Classification code common to area covered common to the organisations members of the network	X	M	S
Classification code peculiar to system	X		
Keywords, descriptors, terms	X	M	S
Full text	X		

- \* A: X = the item is present in the record (input record)
- \* B: M = the item is mandatory for output
- \* C: S = the item is optional for output
- \* C: S = the item is used for search
- A = the item is available for search

Classification basis used:

D.

ORGANIZATION BASIS

Media used for total records: DISK

Media used for the search records: DISK

Computer based

Configuration: IBM 360/30 DOS  
64K

Minimum configuration required to search the files for retrieval purposes or to replicate the system performance elsewhere:

2 tape drives Card reader  
1 disk drive + sys Printer

Reprographic methods used to distribute the output of the system:

E.

OUTPUT TO USER

Output options available:

Listing  
Magnetic tape file

Machine-readable format in which output is available:

EBCDIC

F.

USAGE INFORMATION

Availability of the system: Any

Charge basis to users: Free of charge

Estimate of input of citations: Starting period 1950

Estimate of output of citations:

G.

RECORD OR PLANNED DEVELOPMENTS

REFERENCES

COMMENTS

See above RECORD CONTENT:

We understand by "mandatory" that the presence of the item is required in the output we produce.

"Abstract Originated at Source" means synopsis written by our correspondents (not Author abstract)  
For us:

"Abstract Originated by System" means synopsis written by ourselves.

Full text: We mean that the keywords are contained in a text in natural language.

3.8. CENTER FOR INFORMATION AND DOCUMENTATION OF THE  
COMMISSION OF THE EUROPEAN COMMUNITY

by H. DETANT  
EURATOM

HISTORY

The European Coal and Steel Community (E.C.S.C.) was created in 1952 by a treaty signed between the following six countries : Belgium, France, Germany, Italy, Luxembourg and the Netherlands. In 1958, the same six countries signed two other treaties, creating the European Atomic Energy Community (Euratom) and the European Economic Community (EEC) generally called "Common Market". Each of the three Communities was headed by a Commission.

In 1967 the six governments decided to have the three Communities managed by a single Commission of nine members, and to merge their administrations, libraries, information and computer departments. Since 1968 the responsibility for dissemination of information in the fields of coal and steel, atomic energy, and economics, lies with the Center for Information and Documentation (C.I.D.) in Luxembourg.

LIBRARIES

The Community now has one major library, in Brussels, covering economic, legal and social literature, and several libraries covering the literature of science and technology, in Brussels, Luxembourg, Ispra (Italy), and other research establishments. Serving users with different needs in different locations, and showing different degrees of mechanization, these libraries cannot be merged in a near future.

Only the responsibility for the collections of the scientific technical libraries lies with the C.I.D.

The C.I.D. serves as a depository library for the U.S. Atomic Energy Commission and has an extensive collection of reports of other nuclear energy organizations.

## PUBLICATIONS

The C.I.D. publishes several hundreds of technical reports per year, representing the results of Community research in the field of nuclear energy, coal and steel. In addition, it publishes "euro-spectra", a bi-monthly journal of scientific level, in five languages, including English; "euro-abstracts", an abstract journal covering Community activities; and "transatom", a bibliography of Eastern literature on nuclear energy, translated or not.

## INFORMATION POLICY

The C.I.D. is responsible for the information policy of the Community itself, and plays a coordinating role between the policy making bodies in the member countries.

## ENDS

Operation of E.N.D.S., the European Nuclear Documentation System which was opened to the public in 1966, is the most important activity of the C.I.D.

Every year, approximately 120.000 documents published in the field of nuclear energy are selected from a total of one million references; they are indexed, and the descriptors stored in the memories of a third generation computer (now an IBM-360/50). The total collection of the system is now of over 1.100.000 documents.

Every year also, several thousand batches of abstract copies are shipped to the center's users, according to "user profiles" or on request, after retrospective searching. Industry, universities and research institutions in the member countries as well as in the Common Research Center constitute the clientele of ENDS.

## EMIS

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C.I.D. developed the plans for the European Metallurgy Information System which goes into operation in early 1971 with the assistance of the metallurgical information centers of the six member countries. These centers contribute approximately 40.000 documents per year, abstracted, indexed and catalogued, to the common file which is processed and duplicated for exploitation by the national centers.

## AGRIS

C.I.D. cooperates with the United Nations' Food and Agricultural Organizations (F.A.O.), the National Agricultural Library (N.A.L.) and Commonwealth Agricultural Bureaux (C.A.B.) in the development of a world-wide Agricultural Information System (AGRIS).

## INNOVATION

A number of innovations in the field of information science have their origin in ENDS.

One is the development of "terminology charts" for the graphic representation of scientific terminology. This facilitates the display and handling of complex hierarchical and other semantic relationships between terms and concepts, so that indexing and query formulation for retrieval are greatly facilitated. Automatic "generic posting" is performed by computer, allowing afterwards an interrogation of the collection on all levels of specificity.

The "compressed file" technique, through which the time required for the matching of queries and documents in a retrieval process is reduced to a minimum, is an innovation of considerable economic value.

"Relevance feedback" is currently performed on retrospective searches, shifting the semi-intellectual screening operations from the human documentalist to the computer.

To-day the C.I.D. team of information scientists and computer analysts has set up a remote-access on-line dialogue system with visual display as well of the computer query (with immediate checking of its correctness and indication of the number of documents in the answer) as of the titles of these documents.

A sub-collection of 250.000 documents with significant titles has been prepared so as to be able to make at once a relevancy assessment on the screen of the visual display. The "hits" so detected are then immediately fed back into the computer in view of performing the "relevance feedback" procedure on the complete set of answers found the total collection.

A visual display of the abstracts will also be available on an automatic microfiche display device that can be operated either manually or by the computer. After the "relevance feedback", hard copies of the pertinent references will be automatically supplied by the printer of the microfiche display equipment still under the control of the computer.

These on-line, remote-access and visualized automated equipments are of primary importance for the creation of a network in the Member Countries, not only in the field of nuclear science and technology but also in the other scientific and technical fields, namely metallurgy and agriculture; such a network, the creation of which has been approved recently by the Council of Ministers, will not be limited to the systems created or processed by the Commission (ENDS, EMIS) but it is also contemplated to connect it to other already existing systems, such as those of ESR0 or Excerpta Medica.

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3. Interaction of economics and automation in a large-size retrieval system. L. ROLLING & J. PIETTE  
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by Sir Thomas Scrivenor  
Secretary, CAB\*

CAB is a scientific information service for agricultural research workers. It caters for the specialist and covers the agricultural sciences in depth in nineteen abstracting and indexing journals. In fact, it is what AGRIS describes as a Level Two service.

For 40 years and more it has used conventional methods for storing and retrieving information, and its coverage has steadily grown until today it scans over 8,000 primary journals annually, in 40 different languages, and publishes 10,000 English-language abstracts. Over 30,000 copies of the journals are circulated, and over 25,000 of these are subscription copies. Most of the subscribers are in Western Europe and the USA.

Three years ago CAB, in partnership with Dutch, American, and German interests, established the International Food Information Service (IFIS) which employs computer techniques in the production of its journal, Food Science and Technology Abstracts (FSTA). Mainly as a result of its successful experience with IFIS, and on the recommendations of the report of a Feasibility Study in 1969 financed by OSTI, CAB has decided that it should adopt computer techniques for all its journals. It is believed that their adoption by CAB will lead to the following improvements in its services :

- (a) Speedier journal production,
- (b) provision of subject indexes in individual journal parts,
- (c) facility of searching the whole CAB data base in order to provide special outputs, e.g. wheat abstracts, tropical abstracts, manganese abstracts, etc.; current awareness publications, SDI services, annotated bibliographies, etc.,

\* This report was presented by Dr E.J. MANN, Director, Commonwealth  
au of Dairy Science and Technology & International Food Informa-  
Service, Shinfield, Reading.

- (d) availability of the CAB data base in forms interchangeable with the world's other major information services,
- (e) availability of information on magnetic tape for sale as a by-product of journal production,
- (f) progressive release of scientific staff time from routine duties for more appropriate work to cope with the increasing flow of literature,
- (g) facility for reducing duplication of abstract production within CAB.

Not the least important of the anticipated improvements will be that CAB's data base and those of other major international service will be mutually accessible. Steps have already been taken to mechanize CAB's services as quickly as possible.

1. A System Group has been formed at Farnham House to carry out the mechanization of CAB's services, and comprises so far a System Manager, a Senior Programmer/Analyst, and a Data Preparation Manager.
2. A Specification Committee has been set up to supervise the operation. It comprises four CAB representatives, one representative each from ASLIB and UKCIS, and an Observer from OSTI.
3. A Standardization Committee has been appointed comprising three CAB Directors, one Assistant Director, and the Systems Manager. The Chairman and the Systems Manager are also members of the Specification Committee. The Standardization Committee is, in fact, the successor body to the Directors' Mechanization Committee which had been active for a number of years. It has set up eleven working groups to deal with the following problems :

- a) Thesaurus (Animal)
- b) Thesaurus (Vegetable)
- c) Thesaurus (General)
- d) Journal Format
- e) Subject Indexes
- f) Journal Citation
- g) Transliteration
- h) Abstract Sequence
- i) Authors' Addresses
- j) List of Council Members, etc.
- k) Abbreviations and Units

The Aslib Feasibility Study Report, in recommending the mechanization of CAB's services, assumed that existing software would be available for a start to be made in 1972. Two journals, Veterinary Bulletin and Index Veterinarius are being published in co-operation with INSPEC Ltd., in 1972 as a pilot project to test the suitability of INSPEC software to CAB's requirements. No decision regarding the system to be adopted for the 17 other journals will be taken until it is possible to judge the results of the pilot project. But it is hoped to mechanize the other journals, or at any rate the bulk of them, in January 1973.

Three major problems have to be solved.

(i) The maintenance of an uninterrupted and unimpaired service during the conversion from conventional to mechanical methods of production. This introduces an element of urgency which forbids prolonged preliminary research. But the experience of IFIS has shown how quickly a new computer-aided service can be brought into existence.

(ii) Internal compatibility between the individuals units of CAB which at present employ methods of production that vary in greater or less degree one from another. This is a domestic matter and is the special responsibility of the Standardization Committee. Most of the problems have already been solved.

(iii) Compatibility with other major information services in the same subject fields. CAB is well aware that it is in its own interest, as well as in the interest of others, that the system it ultimately adopts ought to be fully compatible with other systems. This involves compatibility at the three levels of

machine compatibility  
compatibility of input format  
thesaurus compatibility

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It is in this context that the mechanization of CAB's services becomes involved in the studies for the establishment of an international network of scientific agricultural information services that are being pursued under the auspices of FAO. These studies have been initiated in the hope that it may be possible to rationalize the existing complex early 700 agricultural information services. These involve much duplication of effort, particularly at the input stage. The Director-

General, FAO, has appointed an Advisory Panel and a Study Group of Experts. The report of the latter, recommending the establishment of two international networks (at Level One for current awareness, and at Level Two for specialist information in depth), has been endorsed by the Panel and accepted by the Director General. As a result, a Study Team comprising three Working Groups has been set up. CAB is represented on the Panel and on each of the three Working Groups, and it is hoped that through this representation it will be possible to ensure that the development of CAB's mechanization will be compatible with any system that the Director-General, FAO, may decide ought to be adopted as a result of the recommendations of the FAO Study Team and Advisory Panel.

S E S S I O N 4 :

DEVELOPMENT OF COOPERATION  
BETWEEN  
PRIMARY AND SECONDARY PUBLICATIONS

Chairman : A.J.C. WILSON

4.1. EUROPEAN ASSOCIATION OF EDITORS OF BIOLOGICAL PERIODICALS  
(ELSE)

COLLABORATION BETWEEN EDITORS OF PRIMARY AND  
SECONDARY JOURNALS: ACTIVITIES OF ELSE

by K. FAEGRI  
President, ELSE

The idea of associations of editors of scientific periodicals emanated from the USA where such associations had proved their usefulness, so that UNESCO took up the matter for Europe. It should be kept in mind, however, that it is no final goal to establish such associations for Europe and USA only. The ultimate object must be to establish global associations. However, the problems of establishing such associations in the still unstructured scientific communities in other continents certainly need a great deal of thought and time - ten years may be a guess.

When Biology was selected for the first area for the European experiment, this might to a certain degree be fortuitous, based upon the availability of persons who would be willing to take up the task. But Biology also represents a veritable hornet's nest, due to the structure of the biological information tradition. Biological information is still to a very great extent transmitted through a number of small periodicals, many of them also coming at long intervals or irregularly. However, in Biology such journals cannot be neglected, if for no other reason than because of the provisions of International Rules of Nomenclature.

Many - the majority of ? - European biological journals are sponsored by a scientific society, which is responsible for the appointment of the editor. As everybody knows, this all too frequently takes the form of a last-minute digging out of somebody soft-hearted enough not to refuse, but who admits that he knows very little about editing, by the Executive Committee that knows even less, for election by a General Assembly that knows absolutely nothing about it. And so the tradition is carried on by a combination of apostolic succession and nature method.

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This might have been acceptable during the horse-and-buggy days when information was still on an arts-and-crafts basis. To-day - whether we like it or not - information is an industry, and industry cannot be lead on such a sanguine basis.

To-day's quantitative increase in the information stream (the "information explosion") presents great demands on money and time. Money because the commonly used presentation methods (printing, etc.,) become increasingly expensive, not only in absolute measures because of the increase in volume and the general economic inflation, but also, I believe, in relation to the general price level. Perhaps even more important are the demands on the readers' time. These days are long ago past when the scientific community had the time conscientiously to read the volumes from the learned societies from the first page to the last. Nobody to-day could read all that is published even within his own field (if he had access to it), and only the secondary services, including the abstracts in the publications themselves, can guide him in his choice of reading. The luxury of browsing through a volume of primary print is too expensive for our days.

This situation places the editor in a completely new position. The old demands, that he should know his topic and keep a benevolent eye on the author's linguistic idiosyncrasies are still with us. But to-day the editor must also know the demands of the secondary services (including his own) for bringing the contents of the communications around to the relevant part of the scientific community, and he must know the various technical possibilities that exist within the field and their demands as to presentation, etc.,. Also, especially within some fields the time factor plays a role not dreamt about by our fathers. But especially within the technical fields new ways open so fast these days that it is necessary for editors to have access to an information system dealing with this. And the grapevine of an association may be one of the most effective ones.

With regard to the specific functions of ELSE the collaboration with our American counterpart, the CBE, has been very close and profitable. ELSE is going to take over for experimental purposes part of the third edition of the CBE style manual to try it out in Europe with regard to applicability (1) within the English speaking community and (2) later within the non-English speaking communities trying to publish in English. After some initial experiences has been gained, ELSE hopes to be able to attack the problems of multilinguality - and different presentation traditions.

In addition to the Style Manual group, ELSE has had some other groups functioning, e.g. one on copyright (not too successful, the problems seem to be beyond rational solution), one of refereeing systems, and, above all, one on the collaboration between primary and secondary services. On the latter problem, the Association has recently had a successful meeting at Liblice, near Praha, about which Dr Mann, who is chairman of the working group, will report separately.



#### 4.2. ACTIVITIES OF ELSE IN THE FIELD OF PRIMARY-SECONDARY JOURNAL RELATIONSHIPS

by E.J. MANN  
Vice-President, ELSE

The activities of ELSE in the field of primary -secondary journal relationships go back to the foundation meeting of the Association in Amsterdam in 1967, when a Working Group on Primary-Secondary journal relationships was formed.

This Working Group has regarded it as one of its prime tasks to alert primary journal editors to the need for including concise, informative abstracts of papers in their journals which could be taken over directly by the Abstract journals. This need has become increasingly urgent in view of the shift of emphasis in information processing that has taken place as a result of computerization of abstracting services, leaving less money and man-power available for abstracting.

Internationally accepted guides for the preparation of abstracts, and standards for writing abstracts were becoming available to assist editors in their endeavours.

The Working Group decided that a regional Conference at which primary-secondary journal relationships could be discussed with special reference to the above-named problems, was desirable, and with the kind collaboration of the Czechoslovak Academy of Sciences, such a Conference was arranged and took place at Liblice Castle near Prague in June 1971. It was attended by 50 Delegates from 14 countries, including most of the East European countries, most of the major abstracting services and a number of representatives from International organizations active in this field. Most of the important aspects of primary-secondary journal relationships were discussed in depth and the conclusions of the Conference, given below, represent a fair summary of the proceedings of the Conference.

1. It is recognized that, with the increasing preoccupation of secondary services in the computer processing and repackaging of information a shift of emphasis in the whole system of information transfer is taking place.
2. This shift of emphasis requires closer collaboration between primary journal editors and secondary journal editors than in the past.
3. In order to enable secondary journals to continue to provide as comprehensive a coverage as possible of their particular fields, primary journals should intensify their efforts to provide concise informative abstracts with each paper.
4. The Conference welcomes the availability of clear guide lines on writing of informative abstracts and hopes that the Working Party will be able to issue these guide lines to ELSE member journal editors, together with a covering memorandum interpreting these guide lines for use by biological editors. This memorandum should contain practical examples of informative abstracts and should endeavour to clarify the distinction between informative, descriptive and indicative abstracts, summaries and conclusions.
5. The Conference recognizes that, although authors ought to be the best persons to write informative abstracts of their own papers, this is not always the case, and editor involvement will be required.
6. In this connection, the Conference feels that more efforts should be made to include courses or seminars on scientific writing and information science at the Universities and Research Establishments. It welcomes particularly the initiative of the Council of Biological Editors in issuing a book on scientific writing, designed for such University courses.
7. The Conference recognizes the language barrier problem in the transfer of information from primary to secondary journals and urges both primary and secondary journal editors to take great care to ensure accurate translation of abstracts from the original language into another language. If possible, an abstract in a second language should be provided in the primary journal.

8. Whenever possible editors should ensure that internationally accepted units, symbols, abbreviations and terminology are used in the abstracts. For example the latin binomial should be given for species names, and agreed names for chemical compounds.
9. While recognizing the value of abstract journals as information transfer media, the Conference is aware of the emergence of newer forms of such media as the result of computerization of information processing, lending a new dimension to current awareness and information retrieval services.
10. Finally, the Conference believes that this exchange of views between primary and secondary journal editors has been extremely valuable. It hopes that it will lead to further meetings between biological editors within the Socialist countries. Furthermore, it hopes that ELSE may be able to arrange a similar Conference in one of the Latin countries in the not too distant future.

by H. GRÜNEWALD  
Director of Publications,  
German Chemical Society

1. The difficulties of present-day primary literature are widely known :
  - a) Production, distribution and storage of journals are expensive.
  - b) Limited size of the journals causes long delays in the publication of papers.
  - c) The average reader is interested in only a small fraction (5-10%) of all the papers printed in a given journal.
  - d) It is only by using the secondary literature that specific access can be gained to papers of interest to an individual reader.
  - e) Primary and secondary literature are produced in two independent and uncoupled steps, which necessarily causes expenses and delays.
2. In order to overcome these difficulties and to improve and accelerate the flow of information, a new information system is proposed under the name of "European Chemical Reports". Its organization is outlined in Addendum 1, and its special features are :
  - a) Papers from all fields of chemistry will be accepted for publication. They may be written in English, French or German.
  - b) In addition to his manuscript every author will be required to provide an abstract in the English language (irrespective of the language of the manuscript) which summarizes the important points of the publication and is supplemented by structural formulae, reaction equations, diagrams, etc., relevant to the content of the paper.
  - c) The scientific value of every manuscript is to be checked by two referees. The nationality of one referee should differ from that of the author. Only those manuscripts are accepted for publication which are considered valuable by both referees. All other manuscripts will be revised by the authors until the judgement of both referees is positive. It is not the editor's responsibility to edit a manuscript in the author's place.

- d) The editor will rather be responsible for the technical work leading up to publication. In particular, he checks the abstract and the non-textual material contained therein, supplements it if necessary, and chooses from a given list of key words ("thesaurus") those terms which most appropriately describe the contents of the paper.
- e) The manuscript is published only on microfiche (if desired also on microfilm). The microfiche versions will be sold to libraries which make them available together with the necessary reading devices to the readers. The price of the microfiche versions will be such that every library is entitled to make under the provisions of copyright law as many copies (microfiche or reenlarged on paper) for its internal use as are required without being liable to further charges.
- f) One microfiche contains only one manuscript irrespective of its length (above 59 pages a second microfiche will be required). Every microfiche is given a seven-digit number (ECR number, ECR standing for European Chemical Reports). The first two digits indicate the year of publication, whereas the remaining five digits represent the current number of the manuscript. The ECR number serves for the citation of the manuscript, e.g.

Europ. Chem. Rep. 72/03 135

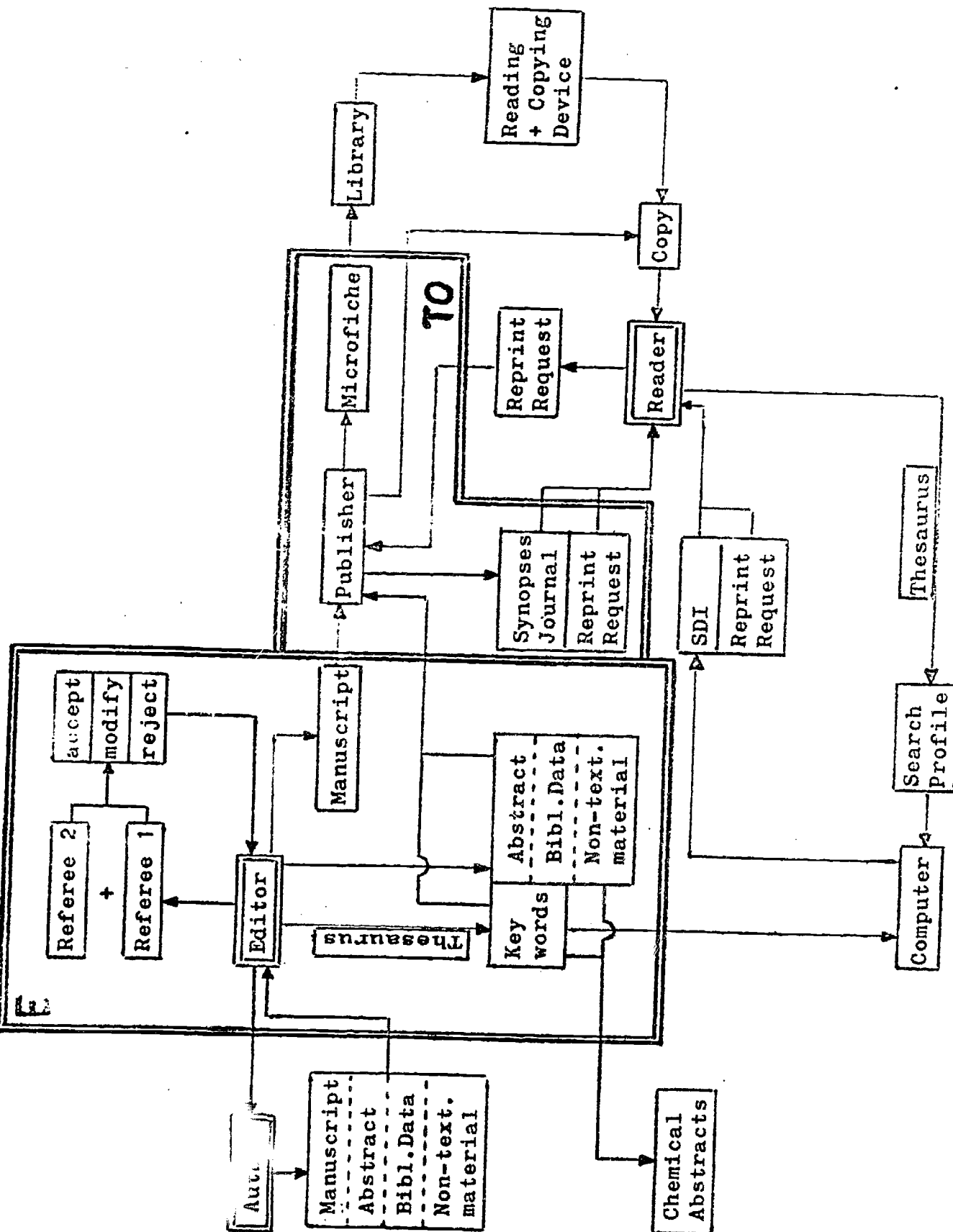
- g) Abstracts, supplementary non-textual material, key words chosen from the thesaurus, and all necessary bibliographic data (author's names and full postal addresses, title, length, ECR number, and original language of the manuscript) will be published in conventional journal form. Here, front and back of one page (format A 5) are available for the data pertaining to a given manuscript (see Addendum 2). This journal will be called "European Chemical Synopses". The abstracts contained in it are again cited by using the respective ECR number, e.g.

Europ. Chem. Synopses 72/03 135.

- h) Every issue of European Chemical Synopses will contain a subject index, which is an accumulation of the key words relating to the individual manuscripts. Also, every issue will contain order cards, which can be used by readers to order manuscript copies (microfiche or reenlarged) from the publisher if library services are not available. Copies are paid for by using special stamps which can be purchased batchwise from the publisher. The stamps are to be attached to the order cards to facilitate book-keeping operations.

- i) In addition to scanning European Chemical Synopses, readers may construct interest profiles using the thesaurus mentioned under d). This will enable the publisher to inform readers regularly about new papers pertaining to their specific fields of work. This service will be known as ECR-SPIN (European Chemical Reports - Specific Information) and will be provided together with order cards as described under h).

# European Chemical Reports Flow Diagram



E = Editorial Work  
TO = Technical Operations

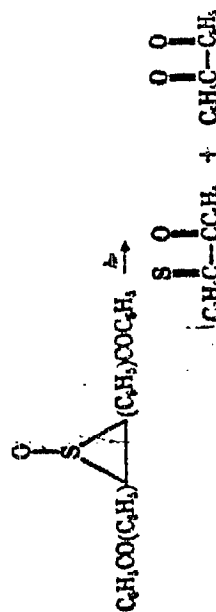
# Photolysis and Pyrolysis of the Episulfoxide of Dibenzoylestilbene

Donald C. Dittmer, George E. Kuhlmann, George C. Levy [+]

Photolysis or pyrolysis of the episulfoxide of dibenzoylstilbene (2,3-dibenzoyl-2,3-diphenylthiirane 1-oxide) yields monothiobenzil and benzil. Triplet sensitizers have no effect on the products of photolysis except as internal filters. A mechanism which involves ring expansion of the sulfoxide is suggested for the formation of the products.

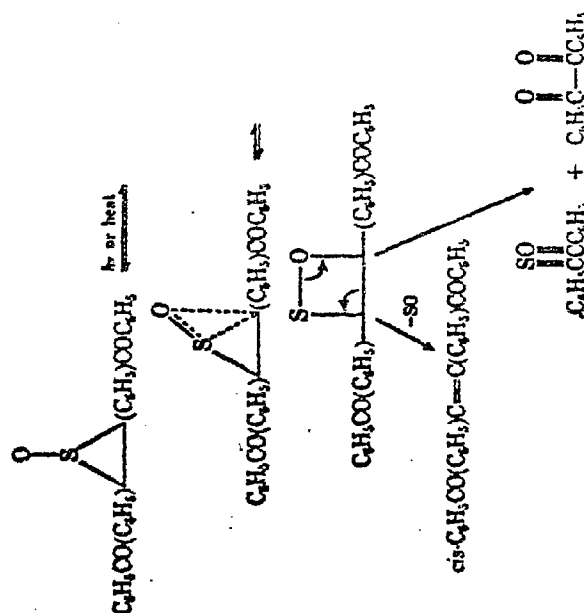
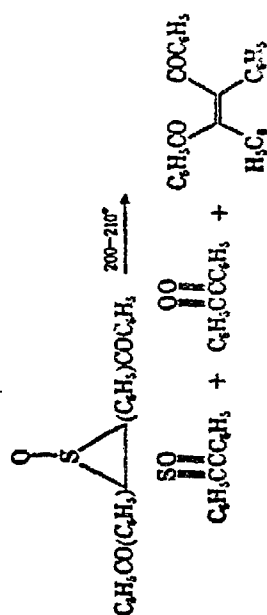
## Key words

benzil  
photolysis  
pyrolysis  
ring  
expansion  
stilbene  
sulfoxide  
thiirane  
thiobenzil



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The manuscript (Europ.Chem.Rep. 72/03 847) comprises 15 typewritten pages and is in the English language.





by J. VAN DEN HANDEL  
Secretary, IUPAP Publications  
Commission

When Professor Wilson asked me to make some remarks on the relation between primary and secondary journals in Physics I accepted though I had not the idea that I would be able to make an important contribution.

The publications commission of IUPAP has had, as long as I know, rather close connections with ICSU AB and we had on several occasions the pleasure of having Mrs Poyen as a guest in our meetings.

One of the documents distributed by our commission is the "Guide for the preparation of authors' abstracts for publication".

The publications committee of the European Physical Society which was founded some years ago has prepared a style manual, also containing advises for preparing abstracts. The fact that Professor Coles is a member of both publications commissions guarantees that both guides do not diverge too much.

For several journals, in which the abstracts are not too bad, the rule exists that they are taken as such by the abstracting journals and in order to speed up the publication page proofs or galley proofs are sent to these abstracting journals so that they are able to publish these abstracts already in an early state.

I have the impression that with respect to the primary journals the abstracting system works well. I am not completely sure whether this is also the case with the communications presented at International Conferences. The IUPAP Publications Commission has advocated a good abstracting service also in this field, in any case when the Proceedings are published in book form or in a journal. A few years ago it was recommended by our commission that the conference secretaries should assume responsibility for bringing these proceedings to the attention of the abstracting journals. Perhaps it would be advisable, either to distribute a list of those journals to which information should be sent or to have a central point, which can be informed.

There is another type of journals, those which publish only the titles. They give a first impression of the content of the articles and of what is going on but the feelings about these title journals are not unanimous after my impression.

I think that it would be desirable when you would state whether after your idea "Letters to the Editor" should be accompanied by an abstract or not. The meanings were divided. But probably this is more a task for the primary journals themselves.

Some questions arise for me :

Is there in the world of the abstracting journals a fundamental difference in meaning between the words synopsis, abstract, summary ?

Is a decimal classification system desirable for you or not ?  
As far as I know it is more used in libraries than for documentation.

Is there any progress in the unification of keywords ?

Is it necessary for machine work to keep to special rules ?  
Example : Some ten years ago we were told ~~not~~ to use full first names but only the first letter of these names, just because of the machines. Using the full names would be a misuse of the available places. I kept to it but later on nobody could tell me whether it was really important. And so there are perhaps more points.

Mr Chairman, I fear that I have asked more for information than that I gave important information, but perhaps the fact that I put forward these questions is also some kind of information for you.

4.5. REPORT ON THE ACTIVITIES OF THE COMMISSION OF EDITORS  
OF BIOCHEMICAL JOURNALS (CEBJ)

by C. LIEBECQ  
Secretary, CEBJ

The Commission of Editors of Biochemical Journals (CEBJ) was created some 10 years ago when the first report of the Enzyme Commission of IUB was completed but not yet released. The officers of IUB had realized that only editors would be able to enforce the rules of the report. One of the main tasks of CEBJ has since been to act as consultant to the IUPAC-IUB Commission on Biochemical Nomenclature (CBN).

The Commission is now composed of 12 full members (a member-at-large and the editors of 11 "major" biochemical journals) and 35 corresponding members (specialized journals, as well as more general journals publishing original work in the field of biochemistry).

The Commission also tries to minimize irritating differences between journals in the requirements for the preparation of manuscripts: bibliographic citations, journals abbreviations, use of symbols and abbreviations, etc. The aim is obviously to issue common basic instructions to authors.

The members of the Commission exchange views on their editorial experience, and discuss problems of ethics such as a code of ethics for editorial handling of manuscripts, human and animal experimentation.

The Commission has tried to meet the needs of the growing biochemical community. Biochemical publication followed an exponential growth between 1960 and 1968 (with a 240 % increase during the same period).

Some biochemical journals have occasionally felt it useful not to publish all manuscripts in extenso, but to deposit part of the supporting evidence as annexes in Data Deposition Banks. The scheme is rather experimental at the moment.

4.6. EDITORS' ASSOCIATION IN THE EARTH SCIENCES AND THE  
EDITOR'S ROLE IN THE STRUCTURE OF RESEARCH

by A. MARTINSSON  
Chairman, AESE-EDITERRA  
Coordinating Council

There are two continent-wide editors' associations in existence within the earth sciences. The first of them, the Association of Earth Science Editors (AESE) was created in Columbus, Ohio, on October 16th-17th, 1967. At this time editors in Europe were independently making plans for a fully international organization, and this group and AESE agreed on a contact meeting to be held during the session of the International Geological Congress in Prague, on August 23rd, 1968. Owing to political and military events, this meeting could not be held.

By a fortunate coincidence, however, UNESCO sent invitations to a meeting in Paris on December 2nd-4th, 1968, for the creation of a European association of earth science editors. The previous year a working group within the ICSU AB, composed of representatives of the three international unions within the earth sciences (IUGS, IGU, and IUGG), had recommended "that the creation of an Association of Editors of primary periodicals in the field of earth sciences be encouraged". The organization of the meeting jointly with UNESCO was entrusted on the IUGS, and in this way the European Association of Earth Science Editors (Editerra) was created.

Consequently, the pattern of continent-wide associations instead of a fully international body was a fait accompli. The apparent drawback to this system is that the lively exchange of manuscripts between the continents will not harmonize with any tendencies to development of separate standards and practices within the individual associations. But there are also apparent advantages. Members of a continent-wide association have without compare better opportunities to meet (and this has proved to be unexpectedly important) than have members of a fully international body. The different language situations in America and Europe influence both practical working forms and the editorial problems considerably.

To eliminate the drawback mentioned, an AESE-EDITERRA Coordinating Council was created under UNESCO auspices at the meetings of the two associations in 1969. Each association is represented by two members, and one represents the unions (IUGS for the present term). Another task for the Coordinating Council is the extension of the system of editors' associations to the continents not yet engaged in such activities but where we find some of the most apparent problems in editing today. Both UNESCO and the unions of the ICSU family should aim at an unbiased international coverage, and the Council would strongly welcome cooperation in the launching phase of the kind experienced when EDITERRA was created.

It should be stressed that the statutes restrict the activities of both associations to periodicals and comparable publications, but in neither case is the program restricted to primary publications. Hitherto it has also been characteristic of both associations that, rather than concentrating the activities to editorial problems proper, they have tried to provide discussion of a very wide range of problems, many of which are essentially the printer's, publisher's, librarian's, or documentalist's. This not very intentional tendency should be duly brought to attention, but doing so by no means implies criticism. As will be further expounded later on, the modern editor must go far beyond his predecessors with regard to insight into the technical-economical conditions for publishing and in his understanding of the role of editing in the entire information procedure.

It is natural that a considerable part of the work has been devoted to the introduction and enforcement of international standards and norms in manuscripts and in editing. As instruments for this the associations started at a very early stage a Style Manual (AESE) and an Editor's Handbook (EDITERRA) project. AESE very early invited cooperation in this field which later became the object of the associations' first joint committee. However, the similarity in editing between the earth sciences and biology, as well as a first-hand effort within the AESE to tackle the problems by an elementary manual at the author's level, have led to the postponement of the main part of the task till the new edition of the CBE manual and the just mentioned AESE-CEGS "Geowriting" manual have appeared. In the hope that the continuation will be a joint effort within the earth and life sectors of natural science, the work will now be concentrated on those parts of editing which are specific to the earth sciences (nomenclature, standards, etc.,).

Other activities within EDITERRA, manifest in an impressive number of committees created at the first full meeting of the association in Ghent in December, 1969, in discussions at the same meeting, and in a smaller number of already finished reports, include the following : Lists and inventories of serial publications and their editors. Policy with regard to computer programmes. Cooperation between editors (i.e. regarding circulating rejected manuscripts, etc,.). Policy regarding solicited manuscripts. Reprints (= offprints) and preprints policy. Congress and syposium reports. Book reviews. Key words (!!). Standardization of references. Teaching of scientific writing. Nomenclature and terminology in the earth sciences. Refereeing procedures. Computerized scientific intercommunication. Organization forms for symposia (also treated by the IUGS PPP Committee).

AESE displays more concentration with regard to committees, most of which are of society business character. In addition to this and what has been previously mentioned there are committees on copyright investigation and on educational programmes. There is an excellent report material, and one of the printed products of the educational activities, "Written communication - a substitute for good dialog" by Melba Murray, has been met with a most impressive number of requests for reprints (1962 copies distributed by October 1970). With four annual conferences already held, AESE has established a working form of panels and discussions of true symposium character. Topics include : New concepts and new technology as opposed to more conventional methods of publication. Copyright infringement by uncontrolled photocopying. Current editorial policies and practices. Publication economics. Procedure and problems of editing. Illustrations. Increasing current awareness in geology. Cooperative publishing. Information systems. Reader-Writer-Editor. Future writers and the editor's future.

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It was mentioned before that influential circles of editors realize that editing must to an extent which is not yet commonly experienced be combined with insight into the technical procedures for making a publication and foresight into later stages of the procedure of scientific communication, including the publishers', librarians', and documentalists' fields of work and the readers' reactions to the publications. This is why we have not wanted to refer the editors of the secondary systems to circles of their own, and related opinions are reflected in a resolution adopted by EDITERRA in 1969 : "It is considered very desirable that communication between earth-science editors and earth-science librarians and documentalists be improved. UNESCO, IUGS, IUGG, and IGU are requested to take the necessary steps in this direction, preferably within the framework of existing organizations".



AESE had 77 members in 1970 and EDITERRS 104. The next meeting of EDITERRA will be held in Leiden in December, 1971, and the next meeting of AESE in Reno, Nevada, on October 10th-12th, 1971. The agenda of the latter meeting includes a panel discussion on the topic "What is an editor?".

Well- what actually is an editor? One of the answers would be the following, which does not exclude the big, self-supporting serials with a differentiated staff and extensive possibilities to buy technical services but which refers in particular to the vast majority of one-man operations with a few thousand copies in circulation.

A scientific editor is a product of the attitude he takes, the range and level of competence he acquires, and the attitude of his employers, including or in fact identical with his fellow scientists.

An editor may take the attitude that editing is beside science and that editorship is honorary. He is there to screen the flood of manuscripts from a purely "scientific" point of view. His technical engagement is generally concerned with the shortening of long sentences and similar things, but for the rest he is just an intermediate between the author and the "printer". The next stage is for the "technical people" (who were so kind and inexpensive when he was young and started publishing but many of whom are becoming extinct). What lies beyond the date of publication is never his business. This is an old type of editor.

An accessory type of editor frequently occurs in the writer's imagination but increasingly seldom in reality. He is the unselfish little helper of science, on a side-track, who re-writes manuscripts for his much more important colleagues on the main line, corrects the spelling, inserts periods and commas, and reads the proofs for whose careful checking the author did not have enough of his expensive time. The writer referred to is an old type of writer, and if he is asked whether he would volunteer for an editorship, his answer is in the negative.

Another type of editor regards editing as an integrated method of science, dealing with the research material at its most valuable stage, i.e. when it is present in the form of results. He does not pass unnecessary or inconvenient technicalities on to the "printer", but brings them into order himself and tries to relieve himself from

them by teaching the writers who unnecessarily created them. Acceptance of a manuscript and approval for publication are to him connected with deliberations whether these decisions lead to most suitable channeling of the results to the most extensive circle of readers, and he tries to take the printer's, publisher's, librarian's, documentalist's and selective reader's point of view as to details in the composition of the manuscript. This type of editor has the privilege of being able to act as a teacher in his scientific speciality without respect to university or state boundaries, and, owing to the kind of contacts he keeps with his authors, he can even serve as a promotor of science by launching the results of scientifically submerged potential writers when they are most timely for science. This is the new type of editor, and he should bring up the writer to be much of the same kind.

#### KEY TO ACRONYMS

#### ADDRESSES AND REFERENCES

AESE : Association of Earth Science Editors (America). Chairman : John W. Koening, 204 Rolla Building, University of Missouri - Rolla, Missouri 65401, U.S.A. Secretary-Treasurer : William D. Rose, Oklahoma Geological Survey, Norman, Oklahoma 7309, U.S.A.

AESE-EDITERRA Coordinating Council : Chairman : Anders Martinsson, Department of Palaeobiology, University of Uppsala, Box 564, S-751 22 Uppsala, Sweden.

CBE : Council of Biology Editors. The manual referred to is "Scientific writing for graduate students", ed. F. Peter Woodford, McMillan 1968 (new edition in preparation).

CEGS : Council of Education in the Geological Sciences (USA). Carries out the "Geowriting" project jointly with AESE. The resulting authors' manual will be published late in 1971 or early in 1972.

EDITERRA -European Association of Earth Science Editors. President : Armand Hacquaert, Geologisch Instituut, Rozier 6, Ghent, Belgium. Secretary : Arie A. Manten, Cortezlaan 9, Utrecht, Netherlands.



ICSU AB : International Council of Scientific Unions Abstracting Board.

IGU : International Geographical Union.

IUGG : International Union of Geodesy and Geophysics.

IUGS : International Union of Geological Sciences. Questions within the Union are handled by the IUGS Advisory Board for Publication. Chairman : Anders Martinsson. There is a special IUGS Committee on Geological Documentation. Chairman : L. Delbos.

IUGS PPP Committee : Committee on the Printing and Publication of Papers (1965-1968). Organized the structure of publishing within the Union and issued the "Symposium Rules".

UNESCO : United Nations Educational, Scientific, and Cultural Organization.

4.7. PROBLEMS OF THE PUBLISHERS OF PRIMARY ENGINEERING JOURNALS

by G. GAINSBOROUGH

Secretary General, WFEO

When I saw that I was to follow a number of speakers on the problems of publishing primary journals in other fields, I decided not to prepare an address, but to speak impromptu in the light of what the others had to say, because it seemed likely that many of the problems encountered would be common to all the fields covered, and there would be little point in my merely paraphrasing what the other speakers might well have said.

Early speaker referred to "the information industry", and this is a useful phrase from which to develop the thoughts I have in mind.

Learned journals in the engineering field are published by engineering societies (so-called 'not-for-profit' organisations) and by the commercial press. Some of the commercial journals are as high in quality as many of the best of those produced by learned societies. Both types of publisher are working in the same environment which, today, contains many difficult features, and my own society, the Institution of Electrical Engineers, which has had some success in its publishing programme, takes the view that the learned society as a publisher needs to take a highly professional view of its responsibilities. A previous speaker referred to the difficulty of persuading a member of a learned society to take on the task of editing the society's journal in a part-time, possibly honorary, capacity. This, in our view, is totally wrong: in our publishing activities we endeavour not to appear as professional engineers who are doing our best as amateur publishers, but as professional publishers who hopefully know sufficient about engineering to avoid grave technical errors. We find that we have to adopt what some people might regard as a fairly crude commercial outlook if we are to retain our place in the information industry in competition with others and if we are to make an income sufficient to enable us to experiment and

take risks in trying to meet the needs of our readers in the circumstances of the economic and technical challenge of the present time.

The substance of the present-day challenge is that the methods of publication have remained substantially unchanged since before any of the societies represented at this meeting were founded, but publishers are now faced with such new situations as

- the great growth in material requiring publication.
- the much greater speed of publication now required
- steeply rising costs of staff and of paper, printing and distribution
- the tendency for readers to seek journals in libraries rather than to buy them themselves, and the growth of permitted or illicit photocopying
- acute competition for advertising.

Several of these items lead to a reduction in the number of subscribers to a publication, and otherwise add to the economic problems of the publishers. I might mention in the matter of printing advertisements that these are of value to readers in the engineering field as a source of information on new products and must not be regarded merely as a source of revenue. To obtain a fair share of advertising at the present time requires the employment of well paid and highly competent representatives; it is not a job for amateurs!

The obvious solution to the problem created by the vast increase in the amount of material which is presented for publication, much of which is of an esoteric nature, is to publish fairly lengthy abstracts and to make the original papers available as photocopies of the authors' manuscripts to those who wish to have them. However,

this is a solution which only becomes practicable if there is general agreement on the policy between the principal publishers in a particular field. Authors like to see their papers published in full, and if one society were to publish abstracts only, they would quickly lose all their authors to any other society which would publish in full.

One step towards at least a partial solution of present-day problems might be found in collaborative arrangements between societies operating in the same technical field. A short time ago my own society very nearly reached agreement with another on the joint publication of certain journals, which would have resulted in a reduction in the number of journals actually published, but a much wider circulation of the papers emanating from each society; but unhappily it proved impossible to complete the arrangement because of the other society's inability to face the uncertain financial outcome of the proposed arrangement. This is an interesting example of the limitation which societies find placed upon their freedom of action if their commercial policies do not provide them with sufficient profit to provide reserves sufficient to enable them to take risks which they believe to be for the benefit of the community which they endeavour to serve.

The publishers of scientific and technical journals must always aim to satisfy the needs of the readership to which their journals are directed. In my own society we have found it valuable to conduct opinion polls among a sample of our readers every three or four years to test their reactions to our policies and to elicit their criticisms and suggestions. The majority of the people here present are concerned with the scientific field, so it is perhaps appropriate to mention some of the differences which exist between the matters which scientists and engineers expect to see covered in the journals which they read.

Both scientists and engineers expect to be able to read papers reporting the results of research and development. Engineers, however, are greatly interested in publications which will inform them of the availability and properties of materials, components and other products which they need to use in the course of their work. It might be said that what they need, in this regard, is a reliable consumers' guide. They want papers which tell them how things have been done, and which describe completed projects in a manner which elucidates the way in which unusual problems have been solved; and

there is a constant demand for review papers which give summary accounts of the state of the art in rapidly advancing fields of technology. All these are fields which occupy little, if any, space in journals directed to the scientific community. The point of indicating this difference of requirement is that a problem common to all publishers of primary material is the need to establish clearly in their own minds what it is their readers want, and this may perhaps be expressed in our crude commercial terms as "for what is it that our readers are prepared to pay the economic price?"

A recent move in the engineering field has been the setting up, with the financial support and general encouragement of UNESCO, of a number of international associations of technical periodicals. At first, the idea was to establish associations of editors of periodicals, but it was soon found, at least in the engineering field, that many of the common problems which were likely to be discussed had nothing to do with editorial policy but were essentially of a commercial nature, of interest to the publishers rather than to the editors. The matters they wished to discuss included such subjects as copyright; the development of an agreed system of licensing photocopying; arrangements for republishing and translating; syndicated newsletters; common publishing standards where appropriate; common standards for microform editions; common editorial manuals, common keywords for information retrieval. This not only exemplifies the common problems which face the publishers of engineering periodicals, but also underlines the point I made earlier that one needs to approach the publishing of primary documents in a highly professional way, and that it is not good enough to place one's publishing operation in the hands of a well meaning but essentially amateur part-time editor.

I end as I began, with a plea for professionalism and a commercial outlook. We cannot reasonably expect the members of our learned societies to subsidise an incompetent publishing organisation, or to meet losses incurred through inept commercial policies. Profits, if not for distribution to shareholders, are nevertheless needed to provide financial reserves to support experimenting which, unless one is uncommonly lucky, sometimes involves losses. Readers should be expected to pay the full economic cost of their journals: if they are not prepared to pay that price, then the publishers need to ask themselves whose benefit they think they are serving by continuing their publications.

#### 4.3. REPORT ON PAST AND PRESENT EXPERIENCES OF MEMBER SERVICES AND MEMBER UNIONS IN COOPERATION BETWEEN PRIMARY AND SECONDARY PUBLICATIONS

by Ch. WEISKE  
Chairman, ICSU AB Committee  
on Primary Publications

##### 1) Introduction

Secondary publications collect all the primary publications, evaluate and sort them, and make available the current scientific information to be found in primary publications in a language that may be better understood than the language in which the paper is published. Secondary publications may be considered as a means for communication between the sources of brand-new information and the consumers of information, the scientists and inventors all over the world. Since the single consumer never can survey the huge amount of primary sources himself, secondary publications serve as a means to make the individuals acquainted with primary publications they had never heard of before. Insofar secondary publications advertise the papers published in primary publications. And moreover, they store the knowledge of the world and make this knowledge available via their various indexes, e.g. author, subject, and compound indexes, and bring back apparently forgotten documents, published in the past in primary publications.

Therefore primary and secondary publications should be ideal partners and predestinated for cooperation though - there is no doubt - the problems of the two kinds of publications differ from each other. Since primary publications are the basis of the secondary services it is understandable that secondary publications made the first move in contacting the publishers and editors of primary publications, asking for cooperation.

##### 2) First copies, page proofs

One problem of secondary publications is to keep their users abreast with scientific advances. Timeliness plays an important role. Thus, secondary publications at the same time try to meet all these requirements by improving their own processing procedures and also by inviting the publishers and editors of primary

publications to provide the secondary publications with first copies, preprints or page proofs. In this way two to even six weeks may be saved. Generally first copies or page proofs are sent to the Member Services free of charge or on an exchange basis. Unfortunately until now only 2 (BS)\* to 6% (PA) of the total number of periodicals are received in this way in each year by the secondary services. Of course there are sometimes errors in the page proofs. But according to the statistics 80-90% of the delivered page proofs are reliable. Besides this, some editors even agreed to mail the already checked page proofs to the services.

A special agreement exists between the American Chemical Society and CAS, through which CAS is provided with copies of the manuscripts already accepted by the editors of the Journal of Organic Chemistry (JOC). Thus simultaneously with the editing by the ACS editorial staff the manuscripts are evaluated by CAS (CAS identifies those chemical compounds which will later be recorded in CA volume indexes and supplies the Registry Number in the manuscript).

### 3) Author abstracts

Another point to be mentioned is the utility of author abstracts. Some of the secondary services emphasize that author abstracts are helpful for their work and they appreciate the efforts of some publishers of primary publications to supply the papers with abstracts. The advantage is that in some cases secondary services could not need examine the original paper completely. But in speaking frankly author abstracts not checked by editors of primary publications are often faulty. It seems, however, that the quality of author abstracts is improving each year as the primary-journal editors as well as the authors pay more attention to this part of the papers. Certainly, since the problems of secondary publications are not sufficiently known to editors of primary publications, the abstracts are not always appropriate to be published in secondary publications. For this purpose it may be necessary to negotiate with editors of primary publications for rules for preparing more useful abstracts.

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\* Bulletin Signalétique, BS

Physics Abstracts, PA



Concerning this problem two experiments on author abstracts should be mentioned.

- (1) A few years ago the editor of the journal Angewandte Chemie and Chemie-Information und-Dokumentation Berlin (CIDB) agreed on the following: the authors of Angewandte Chemie were requested to send author abstracts with their manuscripts. These abstracts were not printed in the journal but only in the secondary publication. Nearly all authors provided CIDB with abstracts. The quality of abstracts varied somewhat.
- (2) Zentralblatt für Mathematik (ZM) has an agreement with many editorial offices of primary publications by which the editors upon the acceptance of a paper invite the authors to send an abstract to ZM. This abstract is normally published within ten weeks, and thus often appears before the complete paper is printed. It is obvious that the entire bibliographic references are not available in such cases; these are given in ZM later on, together with a reference to the pre-published abstract. For this reason a clear identification of unpublished manuscripts is important.

### 3) Title of papers

The shortest 'abstract' of an article is the title. The less time scientists have to read the entire paper the more significant the title becomes. The more the title is used for searching by data processing machines the better the title has to be formulated. Thus, e.g. some learned societies which are publishers of both primary and secondary publications encourage the editors of their primary journals to enrich the titles with more informative words.

### 4) Keywords and indexing

This leads over to the problem of keywording and indexing. In this field three kinds of cooperation between primary and secondary publications in keywording are in use or under discussion.

The first is demonstrated by the American Geological Institute (AGI). AGI prepares for cooperating primary journals annual and cumulative indexes using the keywords. A special advantage of this cooperation is that standardization of index keywords for the geosciences can be achieved.



The second is used by ZM; the authors provide keywords together with their abstracts.

The third possibility is that the editors of primary publications should prepare the keywords for papers in their hands (BST, BS). The AIP and Inspec recommend the use of a standardized vocabulary or thesaurus for keywording.

Not only a standardization of index terms but also of compound names is needed to coordinate these items in the substance indexes unambiguously. Therefore the cooperation of editors of primary and secondary publications in ICSU committees is welcomed.

In addition to the cooperation in indexing by the AGI mentioned above, the ACS primary publications staff and the CAS staff are exploring the possibility creating volume indexes for primary publications (Journal of Physical Chemistry) by an automatic extraction of index entries from the computer tapes used to prepare CA issue indexes.

#### 6) Other activities

It should be stressed that in the future the cooperation between primary and secondary publications is considered a substantial element in the information network. This is the only possibility of avoiding uneconomic duplication. Besides this, there would be a saving of time if manuscripts were treated simultaneously for both primary and secondary publications. There are, indeed, new developments in this field. Thus in certain cases editors of primary publications are aided in their work by editors of secondary publications, for example by checking manuscripts and abstracts when preparing index entries for the secondary publication. In the era of computerized information a pressing problem and an essential condition for fruitful interlinkages is standardization of bibliographic descriptions as well as of keywords. For this reason recently Dr. Rowlett from Chemical Abstracts Service (CAS) addressed a letter to editors of more than 1000 primary journals on behalf of Biological Abstracts, CAS, Engineering Index, and Nuclear Science Abstracts and asked them to contribute to the solution of the problem of the citation reliability and standardization. It is recommended that covers of primary journals

should include a coded bibliographic strip for the complete identification of the periodicals to allow for rapid input of compact, unambiguous identification into an electronic or mechanical data processing system.

#### 7) Existing contacts between primary and secondary publications

It is obvious that the entire task cannot be mastered without the active cooperation of editors and publishers of primary journals. That is why the efforts of the Member Unions and editors associations are gratefully welcomed to solve the future challenges together. Examples of such activities are the regional conference of ELSE (European Association of Editors of Biological Periodicals). One item on the agenda was a report by E. J. Mann on the work and objectives of the working group on primary-secondary journal relationships. Likewise at a meeting of Editors of European Chemistry Journals in December 1970 and of European Editors of Primary Journals in Physics in November 1970 the relationship of primary publications to secondary activities was discussed, and the meeting sponsored by the Council of Biological Editors (CBE) included editors of primary as well as of secondary publications.

The other reason why editors of primary and secondary publications should contact each other is that the editors of secondary publications should know what the publishers of primary publications intend to do in order to keep up with the growth of literature.

#### 8) Summary

Thus, for many reasons, last but not least economic ones, primary and secondary publications should unite their efforts. A closer cooperation is, indeed, desirable or even necessary. This means that editors of primary and secondary publications have to develop new conceptions. After analyzing the problems carefully common working rules have to be worked out. Finally the possibility of combining editorial work for primary and secondary publications should be examined.

As a result of the discussions which took place during this session, it was decided to strengthen cooperation between the ICSU AB and existing Associations of Editors of Primary Publications.

A joint ICUS AB/Associations of Primary Publication Editors was created to study further the problems of cooperation and propose to the Associations and to the ICSU AB practical steps to improve and develop it. This Working Group will hold its first meeting during the fourth quarter of 1971. Among other topics, the preparation of a draft guide for cooperation between Editors of Primary and Secondary Publications will be discussed.

This joint Working Group is chaired by Professor A.J.C. Wilson.

S E S S I O N 5 :

MARKETING OF SECONDARY SERVICES

Chairman : D.B. BAKER

## 5.1. MARKETING PROBLEMS AND ISSUES

### BACKGROUND PAPER

Prepared by Dale B. BAKER  
Director, CAS

#### I. Purpose:

To discuss approaches to and aspects of marketing problems and issues on a broad basis from the top management points of view.

#### II. Definition of Marketing:

- A. The modern concept of marketing is one which starts with an interpretation of consumers' needs and desires, both qualitatively and quantitatively, follows through with all the business activities involved in the flow of goods and services from producers to consumers, and ends with these services necessary to aid the consumer in getting the expected utility from products he has purchased.
- B. Marketing is the orientation of all marketing functions toward the customer, and the making of all management decisions in the light of customer needs, and for the purpose of satisfying those needs at minimum expense with optimum sales volume, and profit to the vendor, and maximum value and benefit to the customer.

#### III. Marketing functions are generally recognized as:

Marketing research

Product planning

Sales

Sales promotion and advertising

Service

Marketing management

Not all of these functions are necessarily required nor clearly apparent in all organizations.

IV. In the past the following topics relating to marketing have been considered as being in ICSU AB's future program of studies and projects:

1. Education

A. Assist and encourage education of scientists, management, and organizations, of the value, importance, and cost benefits of modern information systems.

B. Educational requirements for scientists and engineers on effective use of secondary services.

C. Encourage formation of information dissemination centers in countries where they do not exist.

1. Establish criteria for different types of information centers.

2. Develop guidelines of working relationships and responsibilities with information centers.

2. Study of users' needs

A. Continue the activities of the working group of users' needs.

B. Increased study and emphasis on user requirements.

C. Consider from the behavioral sciences approach.

3. Establish programs of studies on economics of abstracting and indexing services

A. How to achieve economic viability?

B. How to develop program on marketing?

C. How to establish experiments and studies on wholesaler and retailer problems?

## V. Some Marketing Problems and Issues

1. Educational aspects in relation to marketing
2. Information Dissemination Centers (IDCs)
3. Wholesaler vs. retailer problems for abstracting and indexing services
4. Economic problems and factors
5. Market research
6. Other marketing management issues
7. Can or should ICSU AB develop a marketing program (to help Member Services)?

5.2. SUMMARY OF THE DISCUSSION ON MARKETING

by G. GAINSBOROUGH

Secretary, Institution of Electrical  
Engineers

Mr. V. Drake (INSPEC), who opened the discussion, stressed the need for good and vigorous salesmen who could seek to ascertain the needs of potential customers and to persuade them of the value of the services they offered. Other methods of promoting the use of information services, e.g. by the postal circulation of brochures, was no substitute for personal salesmanship of this kind.

It was essential to secure feedback from the customers as a basis for improving the services supplied to them, which meant that the salesmen must meet the scientists and engineers who actually used the services rather than, or in addition to, the administrators and information officers. It was important to persuade top management of the value of information services so that they would respond sympathetically to requests for the purchase of such services by the technical staff. Market research to ascertain the location and number of potential users provided an important basis for sales promotion.

From the ensuing discussion it was apparent that few of the services represented employed salesmen or carried out market research. Indeed, some speakers were clearly antipathetic to the idea of indulging in such commercial practices, and stressed their view of their roles as providers of non-profit-making services. However, the object of salesmanship is not necessarily to make profits. (Profits can easily be avoided by charging less!) Better marketing will increase the overall value of the services to the community by increasing the number of users.

The economic difficulty of providing services in a language with a relatively limited readership was pointed out. Costs were high but the sales potential was relatively low. Nevertheless, the producers of such services, like those who provided services in more



widely used languages, could benefit from vigorous marketing, but it might well be necessary for them to seek financial support for such services from industry or Government.

Some services have found that scientists and engineers expect their information needs to be met free of charge, and some services have even found librarians and information officers resistant to accepting information services because they apparently regard them as a threat to their own functions. It is clearly necessary to foster the view that users of services should regard these as necessary tools of their trade which must be paid for at a fair price, like the material equipment they need to do their work; and that information services tend to increase rather than diminish the services sought from librarians.

The discussion brought out a number of suggestions as follows, for action that might be taken by ICSU AB and member services to promote the use of information services:

1. Educational Activities

A. Some colleges and universities already include, in science and engineering courses, instruction on the use of information services. IAB should encourage and assist developments in these areas wherever possible.

B. Some learned societies (national and international) have professional groups dealing with the communication of information, promoting the writing of papers and holding discussions on subjects of mutual interest. Those should be encouraged and assisted wherever feasible.

2. Promotional Activities

A. To prepare material which could be used to create an environment of opinion favorable to the use of modern information services. (It should be recognized, however, that requirements differed widely as between one discipline and another, so that individual services needed to cultivate their own fields in addition to any general fertilization which ICSU AB might accomplish.)

- B. To seek to influence funding bodies such as Governments (especially in the less affluent countries) and top management in industry.
- C. To promote a publication program, including articles on information services in widely read science and engineering journals on new developments and status of activities in the field.
- D. To prepare charts showing the details and sources of services available in all the scientific and engineering disciplines.

### 3. Market Research Activities

- A. To develop a program of discussions on the goals of market research, what is wanted by the users as well as member services, and the methodology on how to achieve.
- B. To form a clearinghouse for exchange of results and data bank for listings of organizations which may be interested in the use of information services.

### 4. Future Meetings and Working Groups

- A. To hold further meetings on various aspects of marketing problems and to exchange ideas and discuss in detail some of the issues.
- B. To form a working group to plan ICSU AB future activities in the area of marketing activities.

A N N E X E S

ICSU AB POSITION STATEMENTS

ICSU AB POSITION STATEMENT IN RELATION TO UNISIST

ICSU AB POSITION STATEMENT IN RELATION TO UNISIST  
as approved by the July 1971 ICSU AB General Assembly

In 1966, following approvals from the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the General Assembly of the International Council of Scientific Unions (ICSU), the two organizations, one inter-governmental, the other non-governmental, undertook a jointly sponsored inquiry into the feasibility of a world science information system. The basic guideline employed consistently throughout the course of the study was that the world science information system under study must be considered as "a flexible network based on the voluntary cooperation of existing and future information services".

During the course of this study, the ICSU AB:

- has participated actively in developing the UNISIST programme, and will be found mentioned many times in the UNISIST report.
- has been nominated by ICSU as a principal point of liaison between ICSU and UNISIST.
- is "not only an effective forum where the world's disciplinary-based abstracting services can exchange ideas and develop cooperative programmes; it is also the nucleus of an action group dedicated to the UNISIST principles". (UNISIST Synopsis, page 50).
- has been jointly responsible since 1968 with UNISIST for the Working Group on Bibliographic Descriptions and its Task Groups. This Working Group has:
  1. produced a reference manual for the interchange of bibliographic descriptions in machine readable form between abstracting and indexing services covering all types of published material. This will be tested, evaluated and published during the coming year.
  2. formulated and published detailed recommendations regarding transliteration of alphabets and abbreviations of periodical titles which have already been adopted by ICSU AB Member Services.
  3. launched the concept of an International Serials Data System (ISDS) and been responsible, through one of the ICSU AB Member Services, for the preliminary system design of this ISDS. This concept has been adopted by the UNISIST Central Committee which has transferred all responsibility for its implementation to a special UNISIST Task Group.

- has launched a world plan for developing cooperation at the input stage between abstracting and indexing services, which has been endorsed by UNISIST.
- is continuing to develop among its Members cooperative studies and projects such as multilingual thesauri, common classification schemes etc., which fall into the scope of UNISIST.

ICSU AB believes:

- that UNISIST has an important leadership role to play in the promotion and coordination of the activities of existing and future international organizations specialized in some aspects of the information transfer processes.
- that within this framework ICSU AB is the best qualified international organization to deal with practical problems of abstracting and indexing services and their interfaces with all other aspects of scientific and technical information, and stand ready to cooperate with other qualified organizations concerned with these problems.
- that the following are necessary conditions for the success of UNISIST:
  - it must take advantage of the special expertise available in this field through existing organizations which are already heavily committed to international cooperation.
  - it must concentrate on the role of promotion and coordination and must not attempt to direct or to do the research and implementation work involved. It is implicit in this observation that the bulk of the funds made available to UNISIST would be used to support work undertaken by specialized organizations.
  - a proper refereeing procedure, relying solely on expertise available outside the UNISIST organization must be established and the advice of these referees should be paramount in decisions taken in relation to the placing of UNISIST contracts.
  - it must be recognized that major research and implementation activities require substantial funding and that the work will be properly carried out by specialized organizations only if adequate funds are made available.
  - a sound mechanism, including people active in this field and responsible for day to day operations of information systems, must be established to review and evaluate all work undertaken under the auspices of UNISIST.

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ICSU AB believes that the philosophy of UNISIST must be implemented if the problems of information transfer internationally are to be solved. ICSU AB also believes that economic pressures make it essential that a coordinated network of information transfer be established and that it is in the best interest of all those concerned that they cooperate fully in the establishment of a viable worldwide network for the transfer of scientific and technical information.



## ICSU AS MEMBERS

- SPONSORING BODY :

ICSU

- MEMBER COUNTRIES :

Belgium

Canada

U.S.A.

- MEMBER UNIONS :

International Astronomical Union

International Union of Biological Sciences

International Union of Pure and Applied Chemistry

International Union of Crystallography

International Union of Geological Sciences

International Union of Pure and Applied Physics

- MEMBER SERVICES :

Astronomy and Astrophysics Abstracts

Bibliographie des Sciences de la Terre

Bibliography and Index of Geology

Biological Abstracts

Bulletin Signalétique\*

Chemical Abstracts Service

Chemischer Informationsdienst

Engineering Index

INSPEC

Physikalische Berichte

Referativnyi Zhurnal\*

Water Resources Abstracts

Zentralblatt für Mathematik

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\* Services covering most scientific and technical fields.

ICSU AB POSITION STATEMENT : ISDS AND THE INPUT PLAN

ICSU AB POSITION STATEMENT

ISDS AND THE INPUT PLAN

as approved by the July 1971 ICSU AB General Assembly

At its July 1970 Full Board meeting, the ICSU AB has unanimously adopted a "World System for Abstracting and Indexing Services - Part I Plan for developing cooperation at the Input Stage".(1)

Following the meeting of Member Services of the ICSU AB which was held in Paris in May 1971 and at which implementation of the Plan was discussed, the ICSU AB believes that the establishment and provision for maintenance of an inventory of periodicals covered by its Member Services is an absolute pre-requisite to any other studies which may have to be performed before implementation of the Input Plan.

The ICSU AB expresses the hope that such an inventory will form part of the initial file of the International Serials Data System (ISDS) Project (2) and that it will be in such a form that it can be used for the Input Plan.

However, the ICSU AB expresses concern that since the preliminary ISDS design was made available by the UNISIST/ICSU AB Working Group on Bibliographic Descriptions in April 1970, the ISDS Project has moved more slowly than expected and no detailed system design has yet been made known. In these circumstances it seems questionable whether the target date for the availability of such an inventory can at present be established; it is not even known whether this inventory would be the first priority in ISDS development.

Although the Member Services of ICSU AB firmly believe in the usefulness of an ISDS for their operations, they recognize that they would not be the only users and that account would have to be taken of the needs of the library community and others. This might lead to further delays in the implementation of the ISDS.

ICSU AB therefore requests the UNISIST Executive Committee:

1. To state whether an Inventory of the periodicals covered by ICSU AB Member Services will form part of the initial ISDS file
2. To let ICSU AB know the date by which such an inventory will be available.

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(1) Proceedings of the ICSU AB Full Board Meeting, July 1970, pp 79

(2) D. MARTIN - C.I. BARNES : Report on the feasibility of an ISDS.

The concern of ICSU AB is that it does not wish to postpone the initiation of studies preliminary to the Input Plan. In the event that no indication can be given, by 31st December 1971, of the date by which the inventory will be available, the ICSU AB feels that it would be essential, in the best interests of UNISIST, that it seeks support for work on the Input Plan. If this became necessary, it would, of course, ensure, as far as possible, that the work on the Input Plan be compatible with ISDS planning and the results of any such work be placed at the disposal of ISDS.

ICSU AB STATUTES, BY-LAWS, REGULATIONS

ICSU AB STATUTES

## S T A T U T E S

### NAME

1. The International Council of Scientific Unions Abstracting Board hereinafter called "the Board", is an international association of unlimited duration, not seeking to operate for profit, having its legal domicile in Switzerland.

### PURPOSES

2. The purposes of the Board are to organise and promote internationally the exchange and dissemination of information by secondary processing services in science and technology, and to deal with matters related thereto.

### SPONSORING BODY

3. The sponsoring body of the Board is the International Council of Scientific Unions (ICSU).

### MEMBERSHIP

4. The Full Members of the Board shall be as follows:
  - (a) The sponsoring body, which shall appoint two persons as its Representatives on the Board.
  - (b) Those Unions of ICSU which have been admitted as Full Members of the Board. Each such Union, hereinafter called a "Member Union", shall appoint one person as its Representative on the Board.

- (c) Those information services which have been admitted as Full Members of the Board. Each such service, hereinafter called a "Member Service", shall appoint one person as its Representative on the Board.
  - (d) Those countries which have been admitted as Full Members of the Board. Each such country, hereinafter called a "Member Country", shall appoint one person as its Representative on the Board, and shall do so through an Adhering Body which broadly represents the country's scientific and technological information interests.
5. The Associate Members of the Board shall be those organisations which have been admitted as such Members. Each such Member shall appoint one person as its Representative on the Board.

#### GENERAL ASSEMBLY

6. The General Assembly is the highest authority of the Board, and is constituted by the Full Members and Associate Members of the Board. It shall meet every three years, and additionally within three months of the receipt by the President or the General Secretary of a request from at least one fifth of the Members that a General Assembly meeting be held. The chairman of the General Assembly meeting shall be the President or a member of the Executive Committee designated by him. The support of two thirds of those present and entitled to vote is required for the discussion of matters not on the agenda of the meeting. Amendment of the Statutes and dissolution of the Board shall in no case be voted upon if not on the agenda of the meeting. The actions of a General Assembly meeting shall not (except as provided in the fourth sentence of statute 17) be valid unless Representatives of more than half of the Full Members of the Board are present.



7. The General Assembly shall have, in particular, the following functions:
- (a) To pursue the purposes of the Board and direct its work, including the use of its funds.
  - (b) To assign duties to the Executive Committee and receive its reports.
  - (c) To determine the principles of membership of the Board, including the dues payable, to admit new Members of the Board, and to terminate membership if necessary. Such termination of membership requires the support of two thirds of those present and entitled to vote.
  - (d) To examine the financial report and budgets submitted by the Executive Committee and, if satisfied, to approve them.
  - (e) To appoint, from among the Representatives of Full Members, the President of the Board from the end of one General Assembly meeting to the end of the next General Assembly meeting...
  - (f) To appoint not more than ten members of the Executive Committee from among the Representatives of Full Members.
  - (g) To amend the Statutes and By-laws when necessary.

#### OTHER MEETINGS

8. Meetings of the Board, called "Full Board Meetings", may take place at any time, usually once per year. The purposes of Full Board meetings shall be to exercise the same functions as the General Assembly (statute 7), with the exceptions of termination of membership, appointment of the President and members of the Executive Committee, and amendment of the Statutes and By-laws. The chairman of a Full Board meeting shall be the President or a person nominated by him. The actions of a Full Board meeting shall not be valid unless Representatives of more than half of the Full Members of the Board are present.

## VOTING

9. Each Representative of a Full Member of the Board shall have one vote in the General Assembly and Full Board meetings, unless the vote has been forfeited. Associate Members shall have no vote. Except where otherwise stated herein, decisions are taken by a simple majority of those present and entitled to vote. The chairman has a casting vote.

## EXECUTIVE COMMITTEE

10. The Executive Committee of the Board is responsible to the General Assembly. It shall be constituted as follows :
  - (a) One of the Representatives of the sponsoring body.
  - (b) Three of the Representatives of Member Unions.
  - (c) Four of the Representatives of Member Services.
  - (d) Two of the Representatives of Member Countries.
  - (e) The President of the Board, if not one of the Representatives appointed to the Executive Committee by the General Assembly.
  - (f) Not more than two other persons invited by the President, on account of their special knowledge and experience. Such persons shall have no vote in the Executive Committee.
11. The Executive Committee's term of office shall be from the end of the General Assembly at which its members are appointed until the end of the next following General Assembly meeting. Each member of the Executive Committee may serve continuously (in one or more capacities) for not more than six years. A vacancy, including that of the Presidency, occurring between General Assembly meetings, may be filled by the Executive Committee for the remaining period until the next General Assembly meeting. Service on the Executive Committee during such a period shall not be regarded as part of the term of six years mentioned in the second sentence of this statute.

12. The chairman of the Executive Committee shall be the President of the Board or another member of the Executive Committee designated by him. The Executive Committee shall meet once per year, and additionally at the request of the President or of six of its members. Decisions are taken by a simple majority of those present and entitled to vote. The chairman has a casting vote. The Executive Committee may invite any Member of the Board or other appropriate organisation to send a non-voting representative to any of its meetings. If necessary, the business of the Executive Committee may be conducted by correspondence. The actions of the Executive Committee shall not be valid unless more than half the members take part.

GENERAL SECRETARY

13. The General Secretary shall be appointed by the Executive Committee, and shall have the following functions, under the direction of the Executive Committee.
- (a) To conduct the daily business of the Board, administer its funds, issue its publications, maintain its records, and act as its legal representative.
  - (b) To inform the Members of the Board, through their Representatives, of the resolutions and actions of the Board and of the Executive Committee.
  - (c) To inform the Members of the Board in due time, through their Representatives, of the date, place and agenda of its meetings.
  - (d) To receive from Members of the Board, through their Representatives, information of interest to the Board.
  - (e) To prepare financial reports, verified and approved by a certified public accountant, and budgets, and present them to the Executive Committee by 31 March in each year.
  - (f) To do everything possible to ensure that expenditure incurred does not exceed funds available.
  - (g) To attend meetings of the Board and its Committees.
  - (h) To appoint staff and fill any vacancies.

### FINANCE

14. The funds of the Board shall be derived from the following sources:
  - (a) Dues paid by Members of the Board.
  - (b) Donations, subventions and legacies, if accepted by the Executive Committee on behalf of the Board.
  - (c) Payments for services rendered or work performed.
15. The funds of the Board shall be used only for the payment of expenses necessary for the attainment of the purposes of the Board.
16. The fiscal year shall end on 31 December. The Executive Committee shall submit at each General Assembly and Full Board meeting, and seek their approval of, a report on the accounts for the period since the previous General Assembly meeting, the budget for the next fiscal year, and an outline budget for the two succeeding years.

### AMENDMENT OF THE STATUTES AND DISSOLUTION OF THE BOARD

17. Formal proposals to amend the Statutes or dissolve the Board shall be made only by the Executive Committee or by one fifth of the Members of the Board. Such proposals shall be discussed at a General Assembly meeting whose date, place and agenda shall be made known to the Members of the Board at least two months in advance. Such proposals shall be accepted only with the support of two thirds of the Full Members of the Board for amendments and three quarters of the Full Members for dissolution. If Representatives of fewer than three quarters of the Full Members of the Board are present, a further such General Assembly meeting shall be held at which the proposals shall be accepted or rejected by a simple majority of those voting, whether present or voting by post. Any amendments of the Statutes shall take effect at the time stated in the relevant proposal.
18. If the Board is dissolved, the General Assembly shall determine the procedure to be followed and the manner of disposal of the Board's assets.

EMERGENCY POWERS

19. If, through events outside the control of the Board, circumstances arise in which it is impracticable to comply with the provisions of the Statutes and By-laws, the General Assembly, the Executive Committee and the officers of the Board, in the order specified below, shall take such actions as they deem necessary for the continued operation of the Board. Such actions shall be reported to a higher authority as soon as this becomes practicable, until such time as the General Assembly can be convened. The order of authority is as follows: the General Assembly; the Executive Committee in meeting or by correspondence; the President of the Board; the General Secretary; failing the practicability or availability of any of the above, any one of the members of the Executive Committee.

The original English-language text of these Statutes, By-laws and Regulations is authoritative.

ICSU AB BY-LAWS

## B Y - L A W S

### APPLICATION FOR MEMBERSHIP

1. No Member of the Board shall be admitted unless application for membership has been made by a person duly authorised by the organisation or country concerned.
2. A country applying for membership shall specify the Adhering body.

### PRINCIPLES OF MEMBERSHIP

3. (a) Members shall agree with the Board's objectives and policy, and cooperate with its programme. In particular, Members shall be willing
  - (i) to cooperate promptly with other Members in the work of the Board;
  - (ii) to support actively the Board's policy of discouraging unnecessary duplication of secondary information processing in the same language and subject field;
  - (iii) to contribute reasonable resources of staff and expertise to the work of the Board;
  - (iv) to ensure that their Representatives act as an adequate liaison between the Board and the Members they represent;
  - (v) to do everything reasonably possible to promote knowledge of the Board.
- (b) Members shall pay dues as determined by the General Assembly. A Member whose dues for any year are not paid in full to the Board before a meeting in the next following year shall have no vote at that meeting. A Member whose dues are not paid in full to the Board two years after the date on which they become payable is liable to termination of membership by decision of the General Assembly.

- (c) A Member wishing to resign from the Board shall do so on 31 December, and shall give to the General Secretary notice of resignation by 30 June preceding. A Member resigning from the Board shall fulfil all obligations which it incurred before its resignation, and shall have no subsequent claim on the funds of the Board.
- (d) A Member which does not comply with the Statutes and By-laws shall be liable to termination of membership by decision of the General Assembly.

#### MEETINGS

- 4. Each Member of the Board shall be represented at meetings of the Board only by its appointed Representative(s) and/or by one or more other persons approved by the President; in any case, one person representing the Member shall have reasonable authority to make decisions on the Member's behalf. The Member shall pay the expenses of attendance of all persons representing it at meetings of the Board.
- 5. Part or all of a General Assembly, Full Board or Executive Committee meeting may be designated an "Open Session". The President may invite attendance at the Open Sessions by appropriate organisations and countries through representatives, and by appropriate individual persons. Those invited shall have no vote, and the Board will not normally pay the expenses of their attendance.

#### COMMITTEES

- 6. The Executive Committee shall have the following functions:
  - (a) To fulfil the duties assigned to it by the Board, and to report its resolutions and actions to the Board.
  - (b) To appoint the General Secretary, define the conditions of his appointment, and direct his work.
  - (c) To appoint the chairmen and members of the other Committees and Working Groups of the Board.
  - (d) To arrange the holding of General Assembly and Full Board meetings.
  - (e) To consider applications for membership of the Board and to make recommendations thereon to the Board.



- (f) To prepare and submit the financial report and budgets described in statute 16, and to seek the Board's approval thereof.
- (g) To conduct any legal actions on behalf of the Board, through the General Secretary.
- (h) To draw up the Regulations of the Board.
- (i) To invite Members of the Board to represent the Board at meetings of other bodies.

7. The permanent Committees of the Board shall include a Planning and Steering Committee. This Committee shall be responsible to the Executive Committee; its functions shall include the formulation of the long-term policy of the Board, especially in scientific and technical matters. The other Committees (except the Executive Committee) and Working Groups shall be responsible to the Planning and Steering Committee. Membership of the Committees (except the Executive Committee) and Working Groups need not be restricted to Representatives of Members.

#### COPYRIGHT

8. The Board holds the copyright in all materials printed in its publications, unless otherwise arranged.

#### AMENDMENT

9. Formal proposals to amend the By-laws shall be discussed at a General Assembly meeting and accepted or rejected by a simple majority of those present and entitled to vote. Any amendments of the By-laws shall take effect at the time stated in the relevant proposal.

ICSU AB REGULATIONS

## R E G U L A T I O N S

1. Each Member should agree to adopt the rules and standards accepted by the Board and should indicate the date by which it will put them into practice.
2. Each Member should, as appropriate, assist the work of the Board in the following ways :
  - (a) By prominently indicating its membership or associate membership of the Board on its publications, stationery and other suitable documents.
  - (b) By notifying the General Secretary of invitations to participate in activities which may overlap with those of the Board.
  - (c) By representing the Board at meetings of other bodies if invited by the Executive Committee to do so.
  - (d) By sending to the General Secretary sample copies of all publications, and promotional material, and information about new developments that are of interest to the Board, including cooperative action with other Members.
3. General Assembly and Full Board meetings are usually held on the invitation and under the sponsorship of a Member Service, which arranges the details of the meeting and provides accommodation and other necessary facilities.
4. As far as possible, about one half of the Executive Committee should retire at each triennial General Assembly meeting.
5. The Committees and Working Groups may appoint Task Groups, which shall be responsible to the appointing body.
6. Chairmen of Committees and Working Groups are responsible for maintaining adequate progress.
7. Expenses of attendance at meetings of Committees and Working Groups will in principle be paid by the Board, but not for more than one person representing each Member. Any person attending should have reasonable authority to make decisions on behalf of the Member which he represents.

8. Dues are payable by Members for the year in which they have been admitted to membership, immediately after admission. In subsequent years, dues are payable on 1 January.
9. Modifications of the Regulations shall be made by the Executive Committee in accordance with by-law 6(h).